

Physical Therapy and Radiology SEP 8 1930
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Medical Lib.

Clinical Medicine and Surgery

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Leading Articles

Vaginesthesia

By Ralph St. J. Perry, M.D., Minneapolis, Minn.

Undulant Fever in Surgical Diagnosis

By Samuel W. Mills, M.D., Middletown, N. Y.

The McMillan Hospital and the Oscar Johnson Institute of Washington University

By Harvey J. Howard, M.D., F.A.C.S., St. Louis, Mo.

Parathormone

By H. O. Nyvall, M.D., Chicago

Coramine

By J. S. Lankford, M.D., San Antonio, Tex.

Tonsil Pathology in Relation to Age

By Jean duPlessis, M.D., Chicago

The Roentgenologist

By W. H. Gilmore, M.D., Chicago

Facial Palsy

By Curran Pope, M.D., Louisville, Ky.

Colloidal Mercury Sulphide-Hille in Wassermann Fastness

By Winfield Scott Pugh, B.S., M.D., New York, City

Editorials

Roentgen
Saving Time

Parenteral Medication
Scrambled Babies

In Angina Pectoris—

DIURETIN TABLETS

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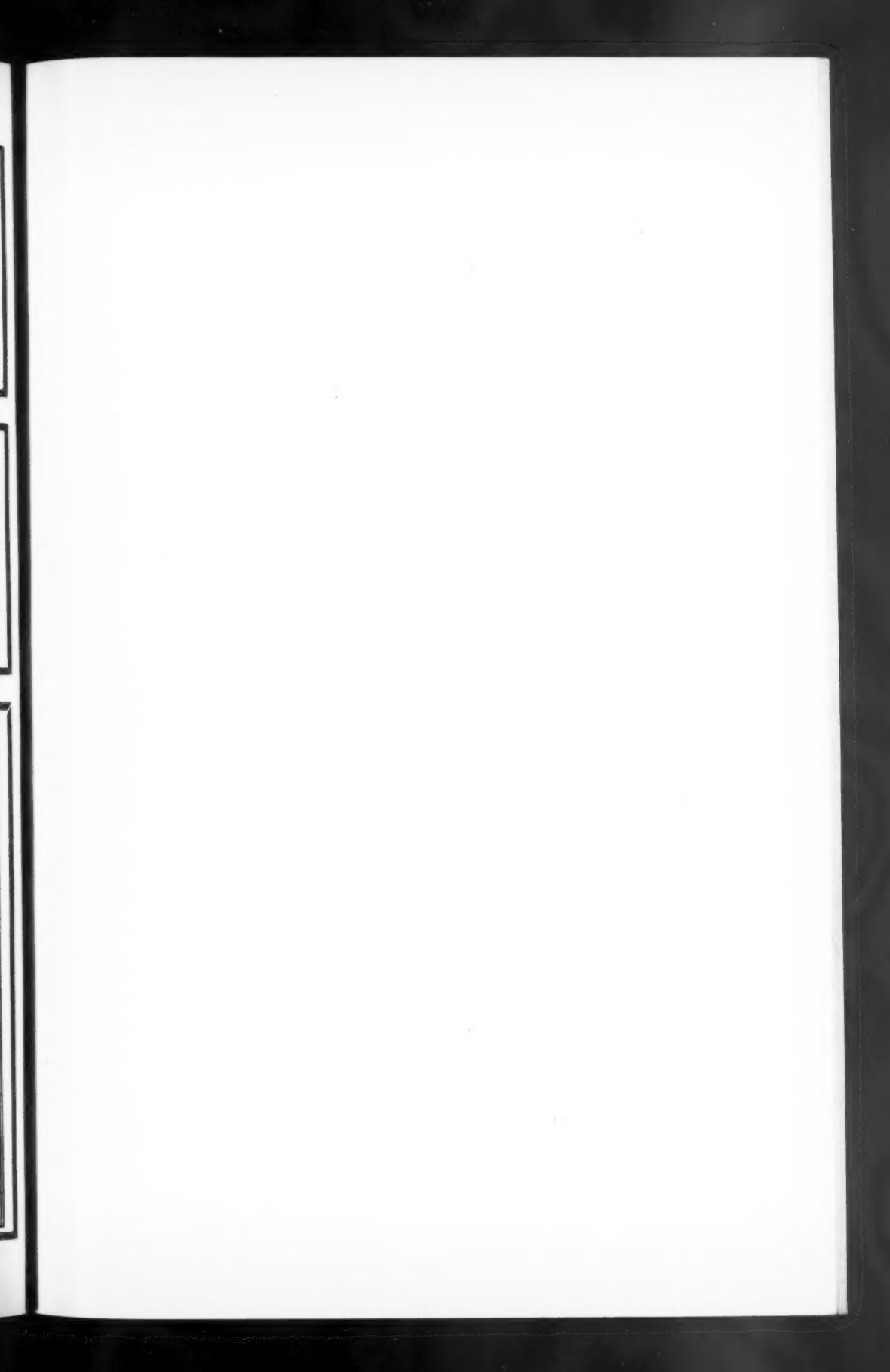
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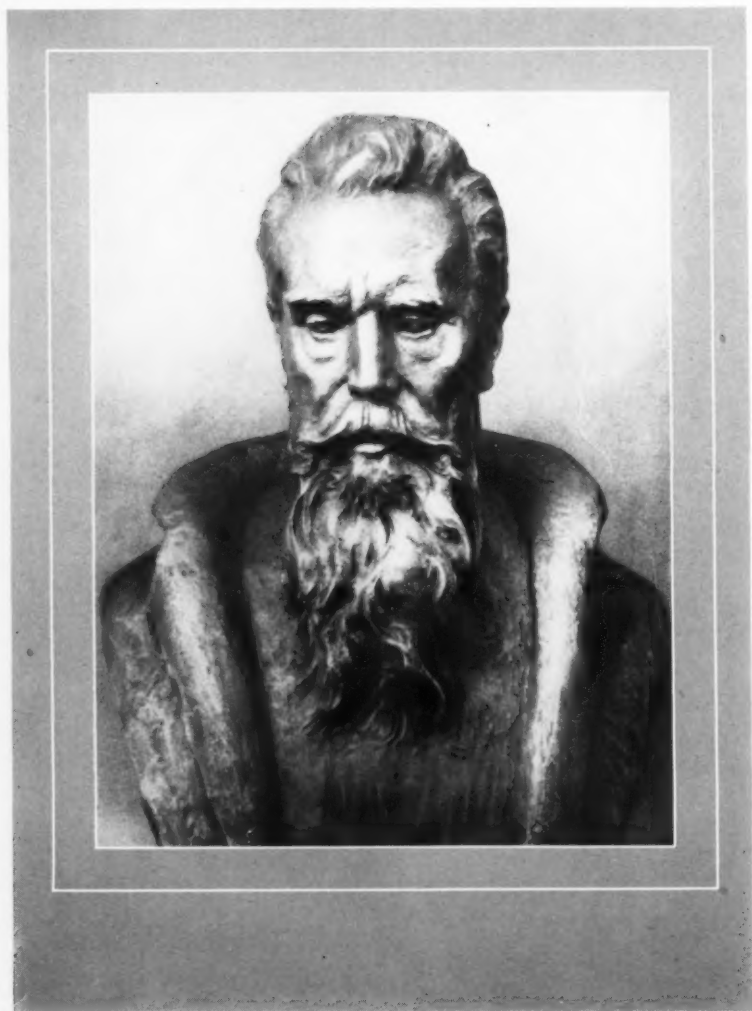
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WILHELM KONRAD ROENTGEN, PH.D., M.D.

CLINICAL MEDICINE AND SURGERY

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Roentgen

A SCHOOLBOY prank, coupled with the tradition of youth the world over, that no manly boy will incriminate his accomplices in a misdemeanor, deprived the world of a mediocre farmer and gave it one of its shining luminaries in the field of scientific discovery; and a very ordinary boy opened the door upon a new and amazing universe.

The sturdy Prussian farmer, Friedrich Konrad Roentgen, had married a Hollandish woman, and they were living in the village of Lennep, in the Rhineland, when their son, Wilhelm Konrad, was born, March 27, 1845, soon after which they moved to the mother's native city of Utrecht, where the boy's early years were spent.

Wilhelm's father planned to make another farmer of him and, accordingly, when the time was ripe, sent him to the agricultural school at Apledoorn, where the vigorous but dreamy lad, who hated routine and standardization, spent more hours in the hills and fields than he did in the classroom and at last was caught in some escapade which, because he refused to reveal the names of his co-conspirators, resulted in his dismissal from the school.

Because of his lack of credentials, Wil-

helm was unable to enter most of the German universities, but the Polytechnic Institute at Zurich was not so particular, and enrolled him as a student.

Even here, young Roentgen did not burn up the world with his fiery enthusiasm for knowledge, much preferring botanizing expeditions among the peaks of the nearby Engadine; but something in him was stirred by the teachings of Clausius and Kundt, and the latter was so impressed by the possibilities of his student that, when Wilhelm had received his Doctor's degree in philosophy, in 1869, he took the boy with him to Würzburg.

But the authorities of the famous university looked askance at the young man's dubious academic records and refused him a place in their faculty (they had a change of heart, later!), whereupon Kundt spurned their offers and took his protégé to the University of Strassburg, where Roentgen settled down for some years as a privatdozent in physics.

The next twenty years or so saw Roentgen's steady rise in power and authority in the field of experimental physics, to which he made notable contributions in several lines. He occupied teaching positions, successively, in the Academy at Hohenheim

and the Universities of Strassburg and Giessen, and, in 1888, was called to be professor of physics in the University of Würzburg, where, earlier, he had met a cold reception, and where, after his great discovery, he was made an honorary Doctor of Medicine.

In 1895, Roentgen was making some studies of the Crookes tube, during which he sensed the presence of some form of radiations with which he was unfamiliar, so he inclosed the tube in a light-tight cardboard box and then, in the darkness, noticed that a piece of barium platino-cyanide paper that lay on a bench nearby was glowing with a ghostly fluorescence. Some might call this an accident; but it is the sort of accident which befalls only men of genius! It occurred on November 8, 1895.

An interviewer once asked Roentgen what he thought when he found that unknown rays of some sort were penetrating his black box. The reply was characteristic: "I did not think; I investigated." Even the thrill of an epoch-making discovery could not sweep this thorough and meticulous scientist off his feet, and more than two months were spent in painstaking experiments, carefully recorded, before he read his historic paper, "Concerning a New Ray," before the Physico-Medical Society of Würzburg, on December 28, 1895.

Much against his will (for he was always a modest, quiet, self-effacing man, who loved his home and the outdoors more than the congregations of the great), Roentgen became famous overnight. The enormous possibilities of what he christened the X-Rays were dimly visioned, even then. The Emperor of Germany invited him to dine, decorated him and made him an "Excellency;" the Prince of Bavaria also decorated him and gave him the privilege of writing the particle, "Von," before his name; honors poured in upon him from all over the world, including, later, the Nobel Prize for Physics (in 1901) and

the Barnard Medal, from Columbia University. He filed no patents upon his discovery, but offered it as his contribution to the world's progress, being content to live modestly (as he had always lived) upon his salary as a teacher.

In 1900, the government prevailed upon him to become director of the Academy of Technical Physics at the University of Munich, and here he spent the remaining years of his life.

One likes to picture this tall, slender, quiet, dynamic man, with his vigorous black hair and beard and burning eyes, toiling patiently, in the freedom of activity which a German University gives its favored ones, and stimulating the thoughts of his pupils, in his capacity, according to Garrison, of a "midwife of minds."

The end of the picture is not so cheering. Roentgen was a deeply sensitive man and had the makings of a hermit, even though he was happily married. When some jealous person circulated the story that the great scientist had appropriated the discovery of an assistant and made himself rich from the proceeds, Roentgen became embittered and almost entirely withdrew from the meetings of men.

The War, too, saddened and depressed him, for he was a loyal German, and foresaw the outcome of the struggle with unusual clearness. Many of his older friends and associates were passing and were being replaced by a newer generation, having different standards and ideals, which he was unable to assimilate.

In 1919 he resigned his chair at the University and retired to a suburb of Munich, where, shortly afterward, he was stricken by the death of his wife. He lived on, sad, lonely and ill, but in reasonably comfortable material circumstances, until, on February 10, 1923, at the age of seventy-eight years, he left a world which had raised him to the peak of fame and then, apparently, forgotten him. His body was cremated and his ashes lie in Ostfriedhof cemetery, Munich.

But the world has not forgotten him. The potentialities of his discovery are widening each year and future generations of physicians and other scientists will agree with Garrison in acclaiming him one of the noblest and greatest men of his generation.

A lucky guess is not mere luck; there is always some talent in it.—Jane Austen.

SAVING TIME

THE United States has gone mad on the subject of saving time.

We send our motors hurtling along the highways at breakneck speed and take chances of sudden death or maiming, in order to pass a car in front of us which is going as fast as we *ought* to go, that we may arrive somewhere forty minutes sooner than we would get there if we drove at a rational speed.

We wait two hours in order to ride upon a train which will deliver us at our destination in thirty minutes less running time than the slower train which left earlier.

We pay fifty dollars a day for every day saved, in order to cross the Atlantic on the fastest liners.

In more ordinary matters, we spend ten minutes in getting out the automobile and parking it, in order to save five minutes on a half-mile walk; or we hop in a taxi to go six blocks.

Physicians take on so many cases that they must "save time" by having an assistant or a technician do a good many things that they ought to do personally. Housewives buy every stitch of their own and the children's clothes ready-made (although they know that they cost more and are worth less than those made at home), in order to "save time."

What does it all amount to? What do we do with all the time "saved" by the breathless speed at which most of us live? If we save money we, presumably, have it to spend for something more worth while—if it doesn't all go "pouf!" in the

stock market. Does saved time work out anything like that, as a rule? Hardly!

Somebody with more industry than sense once figured out the amount of time lost, in a great city like New York or Chicago, by people who were waiting for street-cars, and opined that it would be enough to transact all the business of a metropolis. The only trouble with that idea is that individual lost minutes cannot, like pennies, be pooled and used later. We must, personally, utilize our hours and days *as they come*. They cannot be hoarded.

It is true that the development of the so-called higher things of life—art, music, conversation and that scarcely definable but utterly desirable something which we call *culture*—is possible only to a group or nation which has some degree of leisure. But the possession of leisure does not, of itself, confer all of these benefits. These come only by the proper use of the hard-earned hours of freedom from the pressure of the necessity for earning the daily bread—and plenty of cake and jam.

Most people consider, when they are about to spend a sum of money, whether it will buy them something which will give them its worth in satisfaction. Do most of us ever give the same thought to our expenditures of time?

What are people doing with the hours which have been saved by all the wonderful mechanical devices which the last half-century has marshalled to aid us in the process of living?

The men who have been relieved of the necessity for hewing wood and drawing water; of hunting their meat and making their shoes, are, all-too-frequently, spending the "saved" hours in poker and hootch parties, joy riding or reading trashy or pornographic stories. Even golf, which is a harmless (if the stakes are not too high) and exhilarating pastime, in itself, is a poor substitute for the physical and spiritual glow which comes from doing a truly *constructive* piece of work well.

The women who have "saved" an immense amount of time by living in a two-by-four apartment and eating at cafeterias, are often hard put to it to find ways of "killing" that which they have saved. Bridge parties, movies and other occupations which, at their best, are decidedly ephemeral, are the means used for this shocking slaughter of that which, once killed, can never return to us.

Recreation is fine and is truly indispensable, when it actually comes as a welcome respite from productive effort; but, when it is engaged in as the sole or chief purpose in life, it becomes about the hardest work in the world.

Leisure offers so many possibilities for growth in powers, in faculties, in knowledge and in the capacity to appreciate these fine types of happiness which stay with us, that it is pitiful to see so many working so hard to secure it, and then scattering its golden moments like a drunken sailor, in the pursuit of lust or selfishness or idle whims.

If we have some sound and profitable way for investing our saved minutes, let us save them with all diligence and eagerness! But he who saves time for the mere excitement of saving it, is as despicable as the miser who starves and freezes his body, in order to gloat over his hoard of those shining bits of metal which, if they have not bought him happiness, are of far less value than the bright-colored beads which bring delight to the simple savage.

A loafer is an abomination; but a man who is busy doing foolish things is worse than a loafer.
—Red Fex.

PARENTERAL MEDICATION

THE response to our prize offers, on page 6 of the January, 1930, issue of CLINICAL MEDICINE AND SURGERY, has not been so brisk as we hoped, but the symposium on "The Future of Medicine," which appeared in our July issue and on which voting coupons are coming in (don't

forget to send in yours), shows what our readers can do when they really go at it.

One more competition remains, and the subject is one in which every physician is (or should be) keenly interested and has had more or less experience—"Parenteral (hypodermic, intramuscular and intravenous) Medication."

What use have you made and are you making of the remarkable new substances which the research chemists have given and are giving us? What does *Chemotherapy* mean to you? Which of the injectable drugs have you used; in what types of cases; in what dosages; and with what results?

Every physician has had some experience with these methods and no ethical and reasonable user of them is barred from giving his results to the professional world. The country practitioner, who has used his syringe with judgment and has kept accurate records, has just as good a chance of winning one of the prizes as has the specialist from the city. Remember, the jury of this case will not be composed of those whom you may, not knowing them, suspect of being theory-loving "highbrows," but of practical men and women like yourselves—the readers of CLINICAL MEDICINE AND SURGERY.

Another month is still before you! The manuscripts to be entered in the competition must be in our hands by midnight of October 1. We hope they will all be clearly typed on white, letter-size paper, with double spacing and wide margins; but if you have no typewriter, write out your ideas in ink, in your best chirography and with plenty of space between the lines, and we will dress up your manuscript when it arrives.

The best length for such an article is from 2,000 to 3,000 words, but longer or shorter ones are not barred. If you have good, clear pictures which really illustrate your text, send them along and cuts will be made at our expense.

Whether you win a prize or not, you will have had the fun and the education of *writing* the article, and we will give you 100 reprints to distribute among your friends, as well as placing your name before thousands of keen, progressive medical men all over the world.

Here is the unusual chance to receive money for a medical article. Make use of it!

Truth is to be found wherever man has the eye of perception to recognize it when seen. It must be lived before it can be known.—C. Humphreys.

Scrambled Babies

THE newspapers of the metropolis of the Midlands devoted, in July, many columns of valuable front-page space, with photographs and all the usual "human interest" trimmings, to the case of a couple of babies who, apparently, became mixed up in the hospital where the two mothers were confined at about the same time. It seems likely that such a story was rather widely broadcasted and, as the matter has extensive and important connotations, comment seems apropos.

It appears that two mothers, one a primipara and the other a multipara, having availed themselves of the modern method of being delivered in an institution, rather than at home, returned to their domiciles almost simultaneously. Upon undressing the baby she had brought home, Mrs. B. found a piece of adhesive plaster on its back, marked with the name of W..... Inquiry revealed that the baby which the W. family possessed had borne a tag with the name of B..... And then the trouble began!

It would have been quite simple to assume that the babies had merely been shuffled in the nursery and to exchange them; but how could they *know* that this easy solution would restore both of the tiny boys to their proper parents? The answer is that, apparently, they cannot, and never will, know, to the point of complete certainty, though one family is so convinced that

they have the correct offspring that they have had him christened with their patronymic.

This raises the interesting, and perhaps important, point that, failing the newest methods of identification, the parentage of a child born in a hospital rests, almost entirely, upon the word of the physician who delivered it and the nurse or nurses who have handled it—and they are generally (or often) unable to tell one normal, healthy, ordinary baby of a few days or weeks from another.

A board of weighty authorities, including a dermatologist, an anthropologist, a pathologist, and several others, was appointed to study the blood reactions, the skin characteristics, the personal and family histories and general physical makeup of the four parents and the two children, and an expert detective from Europe, at present in this country, was called in to assist in arriving at a verdict.

The upshot of the deliberations of the scientific group (King Solomon's clever and direct manner of deciding a somewhat similar question being ruled out by the facts that there were *two* babies and that neither mother knew which was which) was, that the children were in proper hands. The distinguished criminal detector, however, dissented from this opinion. So there you are.

After all the years of talk about hereditary characteristics, and the recent learned discussions of the matching of blood types and suchlike, as tests of paternity, it seems odd to realize that, in the absence of some striking abnormality or coloring or configuration, there is no infallible way to distinguish between one infant and another, with reasonably similar antecedents. In some cases, the Mendelian dictum, that two blue-eyed parents cannot have a brown-eyed child, would be helpful; but, where both children had blue eyes, even that would be useless.

It is rather fascinating to speculate as

to how much difference such a scrambling of babies would make, granted that both family trees were equally sound and wholesome, physically. The importance of the post-natal environment is assuming such recognition, these days, that one is inclined to feel that neither pair of parents would be seriously cheated. Of course, if either boy turns out badly, both pairs of parents will be convinced that he is not their child; while if one makes a conspicuous success, all four will feel sure that they are the ones responsible for his existence.

There is, moreover, a very practical side to this rather theatrical episode, which has furnished grist for the publicity mill during a hot and rather quiet summer.

The medical profession, in general, is seriously trying to educate the public to the advantages of using the hospitals in cases of confinement or serious illness, and one occurrence like this will scare off hundreds of half-convinced but not deeply discerning people—the very kind of people who most need the help and the educational possibilities of a hospital.

The only way to counteract the un-

favorable effect of this case, upon prospective mothers who shudder at the thought that their inimitable babies may be conferred upon some less worthy persons, is to assure them, categorically, that such a mischance is, not merely unnecessary, but *impossible*, in an institution which employs all of the methods of identification which are now available—the name necklace (sometimes placed on both mother and child); foot or hand prints or both, made *on the birth record immediately after the child is delivered* (sometimes in duplicate, the copy going to the mother); in addition to the adhesive plaster bracelets and tags on the back, which have been in use for some years.

Physicians who are sending women to hospitals should assure themselves that the institutions they recommend are employing these modern resources in *every case* (if not, they should withdraw their patronage until adequate methods are installed), and then impress these facts upon *all* of their maternity patients—for no woman relishes the idea that she may, perchance, suckle and rear another woman's child unintentionally.



Photo by G. B. L.

SEPTEMBER AFTERNOON

LEADING ARTICLES

Vaginesthesia

By RALPH ST. J. PERRY, M.D., Minneapolis, Minn

IN THE summer of 1884, a group of interns in a large city dispensary learnedly and profoundly discussed the question of the feminine orgasm. Those who studied medicine half a century ago may remember that, in the textbooks of physiology of that era, there was much written regarding this phenomenon, there even being some doubt as to its reality. This lack of information was largely due to special customs and conditions then extant, all references to sexual matters being taboo and every woman glorying in her ignorance thereof. To secure first-hand information on the subject, the interns decided to interrogate every female patient, where it was possible to do so without offense and whenever it was thought that reliable data could be gathered.

Such was the beginning of this research, which has culminated in 1,103 experimental examinations, the conclusions from which are herewith presented. Soon after starting this study it was decided to enlarge its scope, with a view to determine the ability of individuals to differentiate the various sensations which could be experienced in the vagina and to recognize the causes thereof. Because no word could be found describing the subject under observation, the one used as a caption for this paper has been formulated.

In the beginning, the study was carried on in an immethodical way, as a matter of physiologic research, but one day, when subpoenaed to give testimony in a rape case, the questions and cross-questions propounded showed that there was a medico-legal aspect to the matter, and thereafter the study was carried on more systematically.

To facilitate the investigation, a procedure was developed which has been followed as closely as possible and which is revealed in detail in the following synopsis of the observations noted. Manifestly it has been impossible to make all tests in each case, although this has been carried out in quite a few cases which were under observation for an extended period of time. Those under observation were not informed regarding what was being done, nor why, as precognisance or anticipation would most certainly have created a mental attitude which would materially modify the reactions and possibly destroy the value of the conclusions. Nearly every person thought the experiments were part of an examination being made for other purposes.

These observations, covering a period of forty-six years, were made in various parts of the United States, in France, Germany, the West Indies, and the Guinea Coast of West Africa, in both private and hospital practice, and included all races and classes of society, as shown herewith. Occasional notes are attached to the statistics, giving information which may be of interest and value. Frequent reference is made to "normal condition"; just what is to be considered as the normal condition may not be clearly understood, but the conditions found in persons who enjoyed perfect health were used as a criterion.

SENSITIVENESS

Sensitiveness was recorded as: Normal, anesthesia, hyperesthesia or paresthesia, as compared with other individuals and with other parts of the patient's own body.

The vast majority of those subjected to the tests were found to be normal. Six

were discovered to be anesthetic; i.e., the various tests met with no response. These individuals further stated they experienced absolutely no sensations of pleasure, pain or revulsion during copulation. In 107 cases there existed a hyperesthesia which, in 81 cases, has given rise to a nympholepsy; while in 26 there existed a vaginodynia. In 52 cases there were noted sensory perversions, chiefly formications (37); occasionally pruritis (12) (not vulvar, but vaginal); and, rarely, thermalgia (3).

Data gathered from the large number of patients who have consulted me regarding matters pertaining to their sexual life has established the fact that vaginal sensitiveness may be greatly intensified by titillation of one or more hysterogenic spots, by the ingestion of alcohol and by suggestion. It is also increased in some cases of local inflammation, congestion, hyperplasia and neoplasms. There has frequently been noted an increase following pregnancy and a gradual decrease following ovariectomy and the menopause.

ORIENTATION

With the exception of those found to be anesthetic, all persons (1,097) were able to locate the position of a good-sized foreign body within the vagina, as between vestibular and deep placement. Only 27 could, after repeated tests, distinguish between a central and deep or a central and vestibular implant. All except the anesthetic could differentiate between slight and deep penetration of an elongated body (a medium-sized, metal rectal dilator), though none could give any estimate of intermediate penetration. Extreme penetration usually gave rise to pain.

STEREOGNOSIS

1.—*Size or dimensional*: Large, small, long, short, wide, narrow; rapid change in size.

Nearly all subjects were able to distinguish between very large and very small objects, but not so between medium and large or medium and small ones. When the vaginal cavity is empty the walls collapse centripetally, bringing into apposition widely separated areas of mucous membrane, which are supplied by different nerve branches. Therefore, any moderately small object placed in the vagina will touch widely separated points of the vaginal wall, creating impressions upon nerves covering

a large area and conveying the sensation of a moderately large body. If a body be large enough to create a sensation of distension, irritation or pain, or if so small that only a few circumscribed nerve terminals are touched, differentiation is easy. This same holds true in differentiating between wide and narrow and long and short objects. Changes in size were recognized only when the change was one of a major degree.

2.—*Shape or Form*: Of 812 tests made, only 68 were able to recognize the shape of globular and pyramidal objects. None of the others could differentiate shapes of any kind, though tests were made with bodies shaped as follows: cylindrical, globular, cubical, oblong, rectangular, pyramidal, conical and flat, the latter being inserted in the vertical and transverse vaginal axes. Nearly all subjects stated they could sense the object, but could not determine its shape.

3.—*Surface*: Of the 812 persons tested, all were able to distinguish between a smooth and rough surface, but none could differentiate between a corrugated and a nodular surface. Any attempt to insert a serrated or spinous object met with instantaneous resistance, objection and expressions of pain.

4.—*Density*: Ten hundred and eighty-two (1,082) subjects were tested regarding their ability to distinguish between solid, liquid and gaseous bodies, and every one could do so easily. Similar results followed tests for hard and soft, and rigid and flexible bodies, and for changes in density. Inability of many women to detect the presence of small quantities of non-irritant liquid in the vagina has long been recognized, as demonstrated in the thousands of women who are unaware of the onset of their menstrual flow until the discharge is noticed on the clothing or upon the skin. This has been noted in many instances of first menstruation. Others, again, can detect the slightest amount of fluid in the vagina.

The tests with gas were made some years ago, when there was a vogue for treating certain vaginal conditions with medicated air, gases and certain volatile drugs.

Data regarding the presence of water in the vaginal cavity have been collected from thousands of patients who have used douches and, while all recognized the flowing of the water during the administration

of the douche, very few were cognizant of the residual water in the vagina upon the completion of the douche.

This series of tests also demonstrated that many women have more or less control over the action of the sphincter vaginae muscle and that quite a few could, at will, exercise a very marked contractile power. It was further noted that virgins, because of their inexperience, had no voluntary control over this sphincter, but that this phenomenon seemed to be limited to those who had experienced multicoitus.

5.—*Motion*: In addition to the 1,103 persons considered in this investigation, several thousand patients have been questioned relative to their sexual experiences and much valuable information has been gleaned from them. Practically every woman is able to recognize oscillation in the long axis of the vagina, the degree of motion and whether the motion is slow or rapid. In a group of 926 individuals, transverse oscillation was not so readily recognized, only 512 differentiating this motion. A slow, rotary motion, made with a smooth instrument, was recognized by only 97, but a fast motion by 372; the same tests, made with a nodulated instrument, were differentiated by 837 individuals, with comparative ease; expansion and contraction of an intravaginal body was sensed by 746. For years we have taught students not to turn a speculum in the vagina (or rectum), as the procedure caused unnecessary discomfort, due more to the irregular shape of the instrument than to the turning thereof.

5.—*Weight*: In 1,082 experiments made, every person was able to distinguish between heavy and light bodies and the changes from one to another. Only 53 were able to recognize bouyant objects or to distinguish between light and bouyant ones.

6.—*Pressure*: Of the 1,103 persons tested, all except the 6 anesthetic ones were able to recognize pressure and to differentiate between axial, lateral and expansive pressure; also to recognize the release of pressure and the absence of the normal pressure of the pelvic viscera. Changes in the degree and direction of the pressure could be recognized.

7.—*Thermesthesia*: The temperature of the normal vagina is about 99.6°F. One thousand and eighty-two (1,082) persons were experimented upon and all were

found capable of quickly recognizing temperatures higher than 102°F. and alternations from one to another. There was noted a wide variation in the ability of different individuals to tolerate heat and cold, also in the same individual under varying conditions. Few persons were able to differentiate between the extreme cold of ethyl chloride applications and the extreme heat of the electric cautery. Concurrent applications of heat and cold and changes from one to the other were readily recognized.

8.—*Irritants*: Various chemicals and drugs used in vaginal therapy have afforded opportunity to observe the reactions following their application. Silver nitrate and similar caustics caused no pain unless applied to an open lesion. Ether and other drugs which evaporate rapidly produce a sensation of extreme cold or heat. Capsicum and salt caused no sensation of any kind, if there was no abrasion of the mucous membrane. In the cases of two volunteers, mucuna (cowhage), carefully applied to the mucous membrane, produced only an intense pruritis, which was relieved by a two-percent solution of resorcin mopped over the entire vaginal surface. In cases where there were pathologic discharges, as in leukorrhea, gonorrhea, chancroids and cancer, no unusual phenomena were noted; whatever pain or discomfort existed was due to the tissue destruction of the disease rather than to the discharges.

9.—*Reflexes*: Of the several reflexes involving the female genital tract, it was noted during these experiments that such phenomena involved only the pudendal parts and that the vaginal tissues alone played no part therein.

CLASSIFICATION

The subjects of these experiments were further classified as follows:

Race:

Caucasian	668
Negro	
American	312
African	103
Indian	
American	14
Eskimo	2
Yellow	
Chinese	3
Japanese	1
	4

Age:

Under 5 years.....	2
5 to 10 years.....	17

10 to 15 years.....	163	Masturbators	126
15 to 20 years.....	274	Homosexualists	29
20 to 45 years.....	458	Anatomic Conditions:	
45 to 50 years.....	111	Normal	516
Over 50 years.....	78	Imperforate hymen	3
Social Status:		Hooded clitoris	182
Single	363	Undeveloped uterus	7
Married	454	Ovaries removed	84
Widowed	126	Ovaries atrophied (mumps).....	9
Divorced	60	Salpingectomy	4
Mental Condition:		Malpositions	289
Normal	994	Ovarian cysts	3
Insane	28	Uterine fibroids	6
Moron	57	General Health:	
Feeble Minded	24	Of those experimented upon, 918 were	
Education:		regarded as being in good health and 185	
Uneducated	276	in poor; 84 suffered from tuberculosis; 67	
Graded school.....	206	were diabetics; 13 had nephritis; 62 were	
High school	418	syphilitics; 7 were lepers; 3 were obesity	
College	203	cases; and 79 had anemia. Local path-	
Civilized	984	ologic conditions were noted as follows:	
Uncivilized	119	Endometritis	287
Habitat:		Lacerations of cervix.....	309
Tropical zone	97	Ovarian diseases	162
Temperate zone	1004	Pelvic cellulitis	28
Arctic zone	2	Rectal conditions	54
Urban	732	Vesical inflammation	92
Rural	371	Personal Habits:	
Menstrual Function:		Alcohol users	282
Pre	173	Drug habitues	27
Active	756	Tobacco users	
Menopause	102	Smokers	226
Post	72	Snuff users	70 296
Menstruation: The month was divided		Sleep normal	926
into four weeks, designated as pre, mens-		" disturbed	163
trual, post and mid. The time of the ex-		" profound	14
periments is recorded as follows:		Personally clean	886
Pre	286	Personally unclean	217
Menstrual	228	Exercise, active	376
Post	209	Exercise, none	727
Mid	380	Occupation:	
Pregnancies:		Housework	421
Nulliparous	621	Students	176
Monoparous	194	Teachers	37
Multiparous	288	Stenographers	172
Sex Habits:		Children	19
Virgins	213	Clerical	168
Seldom participants.....	33	Leisure	111
Moderate participants.....	453	Dietetic Habits:	
Frequent participants.....	397	Vegetarians	87
Nymphomaniacs	7	Carnivorous	4
Monandrous	395	Mixed	1012
Binandrous	227	Gourmands	76
Polyandrous	268	Abstemious	81
		Normal	946

Religion:

Christians		
Protestants	484	
Catholics	382	866
Jews		208
Mohammedans		22
Confucians		5
Buddhists		2

ORGASM

Reverting to the exciting cause of this investigation, the feminine orgasm, considerable data of more or less interest, involving 7,852 individuals, has been collected and studied. Of this series, 587 persons stated they had never experienced an orgasm, which dysfunction may have been due to psychic, neurologic or anatomic conditions or to defective copulative technic.

Those who functioned presented varying phenomena. An orgasm was considered normal if it took place after from three to five minutes of sexual excitement. Seven thousand two hundred and sixty five (7,265) individuals admitted the existence of normal conditions. In many instances it was noted that there occurred more than one orgasm during a single copulation and, after consideration of all data, it has been concluded that from one to three orgasms during a single copulation may be considered as normal and more than that number as excessive.

In 391 cases there was noted an excess, while 6,074 were noted as normal. There can be no doubt that psychic attitude, the sensitiveness of the nerves and the rapidity of reflex actions have much to do with this function. In many instances we were informed that orgasm took place only after prolonged effort, while others stated that they functioned within a few seconds. Quite a few stated they had experienced an orgasm without copulation, the exciting cause being titillation of some hysterogenic spot. Those who practiced masturbation resorted to irritation of the clitoris, which is also the object of the homosexuals.

In 1,127 cases it was found that the individuals had not experienced an orgasm until some time after their initial coitus. A delay of one or two months was not unusual and, in some cases, the delay extended over a period of years. A number stated that the first orgasm appeared after the birth of the first child; 4 stated they experienced an orgasm only while preg-

nant; a large number who had remarried reported that they had experienced orgasm only after the second marriage. Many admitted their inability to function during copulation with certain individuals, but reacted normally with others, a condition which has led to much domestic infelicity.

Twenty-four (24) individuals were found who had suffered from interrupted function; i.e., because of a severe nervous shock or a postoperative condition, they experienced no orgasm for a period of from six months to five years. During this period of interruption their general health was good and all other bodily functions were normal. In all cases the function returned gradually. One thousand two hundred and sixty-nine (1,269) declared their ability to control or inhibit the orgasm, while 2,328 stated that the act was beyond their voluntary control, although they tried to prevent it. There exists a popular belief in certain classes that if the woman has no orgasm she cannot become pregnant, hence the effort to control the function; but this belief has long since been proven fallacious.

PSYCHIC FACTORS

Inasmuch as the psychic attitude plays an important part in these matters, notations were made regarding that factor. These show an antagonism on the part of 104 individuals, their attitude being due to revulsion, remorse, hate, fear or conscientious objections; in 151 there was apathy or tolerance; 7 were nymphomaniacs; 124 latent cases stated that they experienced all of the preliminary sensations but that, because of the brevity of the copulative act, the climax was never reached and the orgasm failed to materialize; 592 individuals restrained their emotions and aborted the orgasm because, as one expressed it, "education and environment had taught her not to give way to baser passions"; 6,874, or over eighty-seven percent, admitted being normal in all respects.

Usually the orgasm is a spasmodic phenomenon, accompanied by pleasurable sensations which pass away in a few minutes, leaving behind a sense of wellbeing and physical exhilaration. In some cases the spasmodic action was hardly perceptible; in a few there were epileptiform convulsions. The majority of individuals located these sensations in the genital region; but

a considerable number stated, that they seemed to pervade the entire body. In several cases it was stated that these sensations were prolonged from a half-hour to several hours and, in two instances, for as long as twenty-four hours. Excesses caused ennui and exhaustion.

These statistics should form interesting food for thought to all physicians who deal with women in their psycho-physical relations, and may help in solving some problems.

602 Nicollet Ave.

Undulant Fever in Surgical Diagnosis

(A Case Report)

By SAMUEL W. MILLS, M.D., Middletown, N. Y.

THIS IS the case of an eleven-year-old boy, who was admitted to the Horton Memorial Hospital, at Middletown, New York, on October 24, 1929, complaining of pain in the right lower quadrant of the abdomen.

The important points in the history were: (1) The boy had been ill for three weeks, running a fever part of the time, with chills; (2) the night before admission he had developed pain in the right, lower quadrant of the abdomen; (3) he had a slight cough; (4) several days before admission to the hospital, he complained of pain in the right eye and blurred vision; (5) the night before admission to the hospital, he was delirious. The boy lived on a farm on the outskirts of the city.

Physical examination showed a flushed, slightly dyspneic boy of ten years, with a somewhat anxious expression; the pupils reacted to light and accommodation; the tongue was coated; the tonsils were enlarged.

The chest was symmetrical; breathing rapid; the percussion note was of good quality; there was slight dullness in the right base, and some fine crepitant rales were heard, on expiration, over the same area.

The heart sounds were normal; abdominal examination showed slight rigidity over the right lower quadrant; slight pressure over the same area and over McBurney's point caused the patient to cry out and wince; no masses were felt; the liver was not enlarged; the spleen was not palpable; the patient was much more comfortable with the right leg flexed at the thigh.

The blood count, at the time of admission to hospital, was 8,250 leukocytes, with 50

percent small lymphocytes, 6 percent large lymphocytes and 44 percent polymorphonuclears; hemoglobin, 70 percent. The urine was negative for sugar and albumin, and there were 4 leukocytes per high-power field.

Due to extreme abdominal tenderness over McBurney's point and to the rigidity of the abdominal muscles, it was decided imperative to operate at once, although the history of three weeks' illness before coming to the hospital had to be considered. A right rectus incision was made, the peritoneum was opened and the appendix was found to be acutely inflamed. Upon section, it was found to be congested. Microscopically it showed leukocytic infiltration of the mucosa and submucosa. No evidences of typhoid ulcers were seen in the ileum.

Following the removal of the appendix, the abdominal pain was relieved and the boy's general appearance was better. His temperature, which was 103.5°F. on admission, dropped to 99.5° that evening. His pulse, which was 140 when admitted, came down to 100. On the third day, however, the patient's temperature began to rise again and, for approximately fourteen days, the temperature fluctuated between 99° and 102.5° to 103°F. There were no rose spots and the spleen could not be palpated. The patient did not look acutely ill, but the temperature persisted.

Two blood cultures were negative (one by our laboratory and one by the State laboratory); the results of guinea pig inoculation have not been heard from.

Several stool examinations and Widal tests were negative. A von Pirquet test was negative, and two x-ray pictures of the chest were also negative. The abdom-

inal wound had healed and the abdomen was soft, with no areas of tenderness. The blood count, two weeks after admission, was 6,800 white cells; small lymphocytes, 25 percent; large lymphocytes, 10 percent; polys, 65 percent.

A definite agglutination, in a dilution of 1:320, for the *Brucella abortus*, was finally obtained, making the diagnosis of undulant or Malta fever positive. In a later specimen of blood, an agglutination in a dilution of 1:650 was obtained. (Agglutination in a dilution of 1 to 80 or higher is evidence of *Brucella abortus* infection.)

The prevalence of undulant fever is shown by the fact that this is the third case we have had in the Horton Hospital in eight months. Last year, in New York State, only 45 cases were reported; in 1927, only 22 cases; in 1926, only 5 cases.

The *New England Journal of Medicine* states that the age incidence in undulant fever is apparently greatest in young adults of from 15 to 35 years. Males are more commonly infected than females. Farmers and people of rural districts who drink raw milk have been more frequently infected than city dwellers. The period of incubation is usually from ten to fourteen days, in man. Among other diseases to be considered in the differential diagnosis are influenza, typhoid, malaria, tuberculosis, endocarditis, rheumatism and tularemia. The disease is rarely seen in infants or young children. This may possibly be due to some immunity the child possesses. It seems probable, however, that, with repeated blood examinations, some of the fevers of long duration and of undetermined origin, in children, would prove to be undulant fever.

The U. S. Public Health Service suggests that all blood specimens sent to state or municipal laboratories for Widal tests, should be examined for undulant fever. Various government reports seem to make it clear that there are few herds of cattle which are not infected with contagious abortion. Without doubt a considerable quantity of the raw milk consumed in Orange County contains the bacilli of undulant fever. However, although a fair number of scattered cases have been reported, there has been no large epidemic, such as would be the case if the milk were infected with typhoid bacilli or streptococci. The abortus bacilli possess, apparently, a very low degree of infectiveness for man,

and for this reason, while undulant fever is certainly of considerable importance, from a public health viewpoint, its position is by no means to be compared to that of such a disease as typhoid fever, diphtheria or scarlatina.

Within one week after the blood examination of the case here reported proved it to be one of undulant fever, the New York State Health Department sent a physician to the Horton Memorial Hospital to acquire all the facts in the case. A veterinarian was immediately sent out to the farm where the boy lived, and the cattle were tested for abortive fever. Twenty-eight (28) of the herd of 46 cows were found to be suffering from this infection. The health officer of the city of Middletown thereupon issued an order preventing the sale, in that community, of either raw or pasteurized milk from this farm.

Reports from the November, 1929, issue of the *American Journal of Surgery* state that about one-half of the cases of undulant fever show tenderness or pain in the joints. In one of the cases admitted to the Horton Memorial Hospital, acute pain of the knee joint caused an admitting diagnosis of acute rheumatic fever to be made.

Many of the cases show abdominal pain. Among the 125 cases studied by Hardy, of Iowa, abdominal pain was present in 40 cases. In three instances of sudden, right lower quadrant pain, with fever, appendectomy was performed. In one instance a gangrenous appendix was found. In the other two, a normal appendix was removed. In the latter cases the surgeon requested the agglutination test for undulant fever, after operation, in an effort to find the real causes of the abdominal pain. After the agglutination test was found to be positive, a typical undulant fever history was elicited in both cases. In several instances, cholecystectomies have been performed upon patients suffering from undulant fever.

On the other hand, a clergyman of Middletown, several years ago, was treated in the Methodist Hospital at Brooklyn, New York, for six weeks, with a diagnosis of undulant fever. After leaving the hospital he continued to have repeated attacks of abdominal pain and, almost a year after his illness from undulant fever, he was obliged to have an appendectomy performed.

These reports suggest that, when the symptoms presenting are not of such an

urgent character as to indicate immediate operation as a life-saving measure, the careful surgeon will do well to exclude

Malta fever before ordering the patient to the operating room.
60 West Main St.

The McMillan Hospital and the Oscar Johnson Institute of Washington University*

By HARVEY J. HOWARD, M.D., F.A.C.S., St. Louis, Mo.

ONE OF the most significant evidences of the new trend of modern medicine and research in the diseases of the special sense organs is now being demonstrated in the erection of the McMillan Hospital and the Oscar Johnson Institute of Washington University. It is fitting that this institution, the first of its kind west of the Mississippi River, should come into existence in the city where the pioneers, Dr. John Green, Dr. Arthur E. Ewing, Dr. John B. Shapleigh and Dr. Greenfield Sluder laid the foundations for the practice and study of ophthalmology and otolaryngology in the Middle West, and contributed to medical science an imperishable record of original research in their specialties.

In their day, and even until very recently, the clinical work, investigation and teaching related to these special senses were adjuncts to the department of surgery, both here and in other medical schools throughout the Americas. Their growing importance as independent factors in the science of medicine culminated in a bequest of about \$1,200,000 to Washington University, from the late Mrs. William McMillan, of St. Louis, for the erection and equipment of an eye, ear, nose and throat hospital, and in a grant of a similar sum to the same institution, from the General Education Board, to create full-time departments of ophthalmology and otolaryngology. Other gifts from friends brought the McMillan Hospital fund to approximately \$1,500,000. This fund made possible the hospital and clinics and the setting aside of a certain amount of endowment. In addition, facilities were required for investigation and

teaching, commensurate with the opportunities provided in the hospital. Through the generosity of Mrs. Oscar Johnson, her sons and two of her friends, all of St. Louis, the sum of \$650,000 has been given for an Oscar Johnson Institute for Research and Teaching in Ophthalmology and Otolaryngology.

At a cost of \$1,500,000, a fourteen-story building, coordinating the hospital and institute, is now being erected on the corner of Kingshighway and Euclid Avenue, which is expected to be ready for occupancy in the autumn of 1930. The first floor and the ground floor will house the eye, and the ear, nose and throat clinics, each of these services occupying nearly 9,000 square feet of space. The rooms for examination, diagnosis and treatment and for teaching are being so arranged that those in charge will not interfere with one another. In addition, these two floors will provide the necessary space for administration, kitchen and other service rooms for the hospital.

MCMILLAN HOSPITAL

Since this is a teaching institution, the possibility of there being many postgraduate students made it advisable to place the operating floor adjacent to the clinic floors. To meet this requirement, the second floor is divided into six operating rooms and the necessary accessory rooms, a small auditorium seating 120 persons, a conference room and locker rooms for visiting physicians, nurses and medical social workers.

The next five stories will provide 150 beds for the hospitalization of patients, two of these floors being assigned for private and semiprivate patients of the

*From the Department of Ophthalmology, Washington University School of Medicine, St. Louis, Mo.

full-time and the visiting staff, and certain other local specialists. One floor will be given over to colored patients, one to white ward patients, and still another to the care and study of infectious diseases of the eye, ear, nose and throat, which also will be available for trachoma patients from all over the State of Missouri and adjoining states.

The heads of the two departments are organizing their respective staffs on a basis hitherto not attempted for those specialties. In addition to large groups of well-trained clinical men, who will give part of their time without charge to the institution, each department will have several full-time clinicians and a group of full-time scientific workers in the fundamental and preclinical sciences; that is, pathology, chemistry, physiology, physics and bacteriology.

OSCAR JOHNSON INSTITUTE

The six upper floors of the coordinated building will house the Oscar Johnson Institute, although certain teaching and research rooms are being provided on other floors. One floor has been assigned to research in the physiology and physics of the diseases of the eye, ear, nose and throat.

Dr. C. C. Bunch, whose audiometer is now in general use throughout the world, comes from Johns Hopkins University to join the department of otolaryngology as professor of applied physics. He will continue his investigations, with special reference to the causes of deafness. These researches are being made possible by a grant of \$12,000 a year, for a period of five years by the brothers E. Arthur and Frank E. Ball, of Muncie, Indiana.

As assistant professor of cytology in otolaryngology, Dr. Alfred M. Lucas will pursue his special work on the ciliated cells of the nasal sinuses. Dr. William F. Wen-

ner, formerly assistant professor of physiology in the University of Iowa, has been appointed instructor in otolaryngology and will investigate the physiology of the nasal sinuses. This floor will also house the offices and laboratories of physiology and physics, as applied to ophthalmology.

Dr. George Holman Bishop, whose work

with professors Gasser and Erlanger, on nerve action potentials recorded by means of the cathode-ray oscillograph is well known, has been appointed professor of applied physiology in the department of ophthalmology. He will begin work in this special field by applying these studies to the nerves and muscles of the eye.

Dr. Percy Wells Cobb, formerly with the Nela Park research laboratories at Cleveland, has been appointed a member of the ophthalmologic staff as associate professor of applied physics. His special interest is in the problems of retinal



Architects' Drawing (Jamieson and Spearl, Architects) of the McMillan Hospital and Oscar Johnson Institute. The Corner Stone was laid May 14, 1930.

sensitivity.

The fine precision instruments and parts required for all these researches will be made in a well-equipped machine shop on this floor. A glass-blowing room is also provided.

Another floor will offer facilities for all the special and experimental pathology of the two departments. Dr. Harvey D. Lamb has been appointed assistant professor of ophthalmic pathology. He and his assistants are already working in temporary quarters. With the enlarged and complete facilities available in the new building, the teaching of the pathology of the eye and the study and diagnosis of material sent in from this section of the country will receive special and intensive consideration.

As head of the department of otolaryngology, Dr. Lee W. Dean is particularly

interested in the study of the mechanism and the causes of infections of the ear, nose, and throat, and is preparing plans to undertake a thorough investigation of the diseases of the accessory nasal sinuses. Some of the other facilities on this floor are a museum, a pathologic laboratory for teaching purposes and a seminar room, equipped with various forms of projectors.

Three other floors have been planned for research in chemistry and bacteriology in the two specialties. The facilities of these floors will be immediately put to use by a grant of \$50,000 a year, for a period of five years, by the Commonwealth Fund of New York, for the purpose of conducting a comprehensive investigation of the trachoma problem. The etiologic agent of trachoma has been the subject of research for the past two years by Dr. Charles Weiss, associate professor of applied bacteriology and ophthalmology, and his assistants. Dr. Louis A. Julianelle, whose outstanding work on Friedlander's bacillus and other bacteria has been contributed from the Rockefeller Institute Hospital, has been appointed associate professor of applied bacteriology and immunology in the department of ophthalmology. Dr. R. Wendell Harrison, a member of Dr.

Well's staff at the University of Chicago, will join the department as an instructor in applied bacteriology and immunology. These appointments will serve to enlarge the scope of the work already undertaken and permit investigation of other problems of an allied nature.

Dr. James A. Hawkins, who also comes from the Rockefeller Institute Hospital, where for several years he has been first assistant to Dr. Van Slyke, and whose able researches on viruses and the chemistry of the blood are known on both sides of the Atlantic, has been appointed associate professor of applied biochemistry in ophthalmology. He will study the chemistry involved in the investigations of trachoma, as well as that of the various structures of the eye. Dr. Rossleene A. Hetler, formerly associate professor of home economics at the University of Illinois, will have charge of the chemical studies of vitamin and food deficiencies and of the allergies in relation to eye diseases.

A roof garden will provide recreational facilities for the staff and an outdoor sun parlor for the patients. An opportunity therefore will be given to all of those connected with the institution to participate both in intensive work and intensive play.

THE PACKAGE CALLED DISEASE

It is quite characteristic for patients to present their complaints to the doctor as though they were holding up for his observation an unpleasant burden of which they would like to be relieved. "Lift it off, doctor. Do something for me. Get rid of this package of misery."

With varying degrees of skill, dependent upon training and experience, the package is lifted to the desk and, while the patient sits at a distance, is carefully unwrapped. The process of unwrapping so strangely wrapped a parcel requires many elaborate instruments and much practice, and becomes a fascinating occupation. Often, unknown knots and folds are met with, which, in themselves, are so intriguing, that before long, not only is the waiting, expectant bearer of the package forgotten, but the contents of the parcel itself are never reached. Then follows an elaborate description of the package, and finally a diagnostic label is fastened to it and it is handed back to the bearer.—GEORGE DRAPER, M.D., in "Disease and the Man."

Parathormone

By H. O. NYVALL, M.D., Chicago

THE parathyroid gland is the detoxicating agent of the body. This is brought about, in part, by its hormonal action on the calcium salts, which are "fixed" or activated in such a way that the body is able to use them to neutralize the toxins and aid in the absorption of products of inflammation.

Most diseases are inflammatory in nature. In the pathology of inflammation we find hyperemia and more or less exudation. In studying the action of the calcium salts, it is evident that they have a remote astringent effect on the process of inflammation, thereby affecting the colloidal cellular processes, resulting in lessened permeability of the walls of the vessels. Inflammations vary in degree, depending on the etiology and the site of the process.

Many methods have been devised of late to administer calcium to the body. We are all familiar with the action of the ultraviolet rays. Calcium chloride is being used, with good effect, in many types of disease. Now Parathormone, which is an extract of the parathyroid gland, is proving of value in certain types of inflammation. Its action is to increase the blood calcium and enhance its action, to detoxicate the body and to act as a regulator of the thyroid gland. Its use is indicated in tetany and spasmophilia, inflammations, intoxications, and lessened coagulability of the blood.

For the past three years I have used Parathormone in many types of disease, and I have found that the average dose for infants is 0.5 cc.; for children 0.55 to 1 cc.; and for adults 1.5 to 2 cc.

In acute conditions, daily injections of parathormone are given; in subacute stages, thrice-weekly injections; and in chronic states, twice-weekly injections.

In order to enhance the action of Parathormone, I have added calcium salts in some form or other, such as syrup Calciol or syrup of hypophosphite compound, for oral administration; or calcium chloride, 4 grains (0.26 Gm.) intravenously. In the presence of anemia I would

add an ampule of arsenic and iron compound. In following out the above dosages I have seen no ill effects nor noticed any symptoms of hypercalcemia.

INDICATIONS

For the purpose of this study I have grouped my cases under seven headings:

- 1.—Spasmophilia.
- 2.—Exudative diathesis.
- 3.—Bone disease.
- 4.—Hemorrhages.
- 5.—Surgical inflammations.
- 6.—Acute infections.
- 7.—Endocrine disturbances.

1.—**Spasmophilia:** In one case of tetany, Parathormone seemed to effect a cure. It was used with success in two cases of chorea.

2.—**Exudative Diathesis:** I have used this term for lack of a better one. In these cases there is more or less exudation with, seemingly, only a functional disturbance, of unknown etiology.

A.—**Asthma:** In four cases, the paroxysmal attacks were aborted by the injection of 2 cc. of Parathormone, plus 1 cc. of epinephrin, and future attacks were avoided by twice-weekly injections. Two of these cases were in children, who have been freed from asthma for nearly two years.

B.—**Pertussis:** Eight cases of pertussis were aborted or relieved in a period of one to two weeks. Eight to ten injections were given, the first being 0.8 cc., later decreased to 0.6 cc. of Parathormone. In addition, this prescription was given, orally.

R
Tincture of belladonna..m xxx 2.00
Antipyringr. x 0.65
Syrup Calciol.....dr. III 12.00
Syrup orange, q.s.....oz. IV 120.00
M. et Sig.: 1 teaspoonful every 3 hours (for baby, age one year).

Of these patients, three were infants under nine months of age, and one under two months.

In my first case, Baby H., four months

old, I gave it in an emergency, because the patient was cyanotic from impending suffocation. Within four days the rales in the lungs and the snuffles of the nose had cleared, and the paroxysms of coughing had ceased.

C.—Eczema: I treated six cases of eczema—three infants and three adults—who were relieved by the administration of Parathormone. At first, daily injections were given and, later, twice-weekly injections. The patients were also given an ointment of tar, locally (R 1), and a mixture of calcium compound, orally (R 2 or 3).

R 1.—Tar Ointment.

Liq. tar.....(m. xx)* .m. x 0.65
Liq. Phenol.....(m. xx)* .m. x 0.65
Oint. zinc. oxid.
q.s. ad.oz. i 30.00
Sig.: Apply locally.

R 2.—Calcium Compound.

Elix. hypophosphite
calc. comp.oz. viii 240.00
Sig.: 2 teaspoonfuls before meals, for adults.

R 3.—Calcium Compound.

Syrup Calciol.....dr. iii 12.00
Syr. hypophosphite calc.
comp.dr. iii 12.00
Syr. orange q.s. ad.....oz. iv 120.00
M. et Sig.: One teaspoonful, three times a day (for infant, one year old).

D.—Urticaria: I had four cases of urticaria, in adults. Two of these patients were relieved of the disorder by a single hypodermic injection of 2 cc. of Parathormone and 1 cc. of epinephrin (1:1000) and an intravenous injection of calcium chloride, 8 grains (0.51 Gm.). It was necessary to repeat this treatment twice in the other two patients.

E.—Mucous Colitis: Three cases of mucous colitis responded to injections of Parathormone and intravenous injections of calcium chloride, in conjunction with diathermy.

3.—Bone Diseases:

A.—Fractures: In two fracture cases, injections of Parathormone and the oral administration of calcium hastened calcification.

B.—Arthritis: In three cases of acute arthritis, the duration of the ill-

ness was greatly shortened; while in two patients with arthritis deformans, in its early stage, there has been no recurrence of the symptoms after the intravenous injection of 16 grains (1 Gm.) salicylate of soda and 4 grains (0.26 Gm.) of calcium chloride and the subcutaneous injection of 1.5 cc. of Parathormone, in conjunction with local treatment to the joint.

There is a difference between the swelling which appears in infective arthritis and that appearing in arthritis deformans. The swelling about the joint in infective arthritis is produced by the products of inflammation. When the cause of this inflammation is removed there is absorption and a return to normal.

In arthritis deformans, the swelling is of a compensatory nature, in that the cartilage about the joints is increased, in an attempt to restore the calcium deficiency. In recovery, this cartilage is replaced by bone, in the same manner in which this is done during the embryonic stage. In a normal bone, especially from the epiphysis, we have the normal, endogenic source of calcium. In disorders affecting the bones, this source is unable to supply the normal amount of calcium and the deficiency must be made up through some exogenous source.

4.—Hemorrhages.

A.—Gastrointestinal: Four cases of gastrointestinal hemorrhage made seemingly good recoveries on injections of Parathormone, plus intravenous injections of calcium chloride, and elixir of glycerophosphate compound, internally. In two of the patients, there has been no recurrence in two years. For the first five days, they were given daily injections, 20 cc. of dextrose.

B.—Menorrhagias and metrorrhagias were checked by daily injections of 1.5 cc. of Parathormone and 0.5 to 1 cc. obstetric pituitrin, as indicated, and then the oral administration of calcium compound:

R

Parathyroid gland.....gr. iii 0.2
Corpus luteum.....dr. iss 6.0
Cal. glycerophosphate dr. i 4.0
M.: Ft. capsul. No. XXX.

Sig.: One before meals and at bed time.

This method was employed in three

*Note: (m.xx) is for chronic eczema.

patients. In two, the injections were repeated for three menstrual periods.

C.—*Constitutional*: One case of **purpura** and one of **hemophilia** were relieved by injections of 1.5 cc. of Parathormone; calcium, grains 4 (0.26 Gm.), intravenously; and an ampule of arsenic and iron. In the latter case, 10 cc. of thromboplastin (Squibb) was also given.

This same treatment was beneficial in one case of *pernicious anemia*.

I had under treatment a patient with **scurvy**. She was first given injections of 2 cc. of Parathormone and 10 cc. of thromboplastin, with intravenous injections of 20 cc. of dextrose. When the bloody stools ceased, fresh vegetables and fruits were added to the diet, and liver extract was given. She made a rapid recovery.

5.—*Surgical inflammations*:

A.—*Acute Salpingitis*: One patient made a good recovery in three weeks. This patient was treated for vaginal gonorrhea. After a menstrual period she developed chills, fever and pain in the pelvis. There was marked tenderness and rigidity of the pelvis, on both sides; the temperature was 103°F. and leukocyte count 14,000. She was put to bed, with the usual local treatment, and given daily injections of 1.5 cc. of Parathormone for two weeks, and then three times a week. The fever subsided and she made a good recovery.

B.—*Phlebitis*: A patient developing phlebitis, following appendectomy and round ligament transplantation, was treated with daily injections of Parathormone for two weeks and then three times weekly, until edema and tenderness along the vein had subsided. At the end of four weeks she was up and about.

C.—*Acute, simple Orchitis*: Two patients made a good recovery on injections of Parathormone, and calcium compound orally. When the acute symptoms subsided they were given, in addition to the Parathormone, intravenous injections of calcium chloride, 4 grains (0.26 Gm.), plus an ampule of arsenic and iron compound.

D.—*Postoperative wound repair*: The daily administration of 1.5 cc. of parathormone seems to hasten wound repair.

6.—*Acute Infections*: Parathormone has been used with success in measles; pneumonia, in young children; and in a case of erysipelas, in an infant. In the five cases of measles treated with Parathormone, the lungs cleared up in two days, the rash started to fade on the third day and disappeared on the seventh day; the temperature remained normal throughout the illness.

A.—Three cases of **pneumonia** in young children, all made good recoveries. The crises occurred on the sixth day and the lungs were normal by the eighth day. Throughout the illness, the lungs were usually freed from rales. All the patients received 0.6 cc. of Parathormone, by injection, and, by mouth, this prescription:

R
Tincture belladonna..... m. xxx 2.00
Antipyrin gr. x 0.65
Syrup Calcicol..... dr. iii 12.00
Syrup orange q.s. ad..... oz. iv 120.00
M. et Sig.: One teaspoonful every three hours. (For child one year old).

One patient, aged eight months, made a good recovery after a six-weeks' illness, having previously had pertussis, asthma and finally pneumonia, complicated by double otitis media.

B.—Baby G., developed **erysipelas** from an infected bed-bug bite. The lesion started on the right cheek, spread rapidly over the scalp and to the left cheek. On the first day the temperature was 105°F. After that it remained 99°, except for one day when the injection of Parathormone was not administered and the temperature then went up to 105°. The patient received daily injections of 0.6 cc. and made a good recovery in eight days.

7.—*Endocrines*.—In exophthalmic goiter there is a hypoparathyroidism, during which there is a hyperemic condition of the thyroid gland. In three patients, with daily injections of 2 cc. of parathormone, and the oral administration of calcium compound and potassium bromide, the vasomotor disturbances and tremors disappeared and the patients gained in weight and made an uneventful recovery.

While these cases are too few in number to draw any very definite conclusions, it would appear that stimulation of the

calcium metabolism, by the administration of Parathormone and calcium, hastens the recovery of the patient, because of the

detoxicating role the parathyroid glands play.

841 East 63rd Street.

Coramine

By J. S. LANKFORD, M.D., San Antonio, Tex.

"Digitalis is the finger that points to the grave."

THE OLD writer was correct, but it was because they did not know how to give digitalis generations ago. Noting a very slow, irregular pulse, they would push the remedy and increase the heart block, with fatal results. Death lies just below the pulse of thirty.

Digitalis, used correctly, is indispensable, but there are conditions in which it should not be used, and other cases where it does not serve a good purpose. With our present knowledge, no thinking physician would give it in heart block, nor would any surgeon want it administered in shock from anesthesia or surgery. Again, in aortic disease, it not only does not serve well, but it is detrimental, especially if the case is of syphilitic origin, which is nearly always so. In aortic insufficiency, it is only when there is decompensation, to the point of a leaking mitral valve, that it seems useful.

HEART TONICS AND STIMULANTS

In those cases where digitalis is serviceable we have many preparations that are good; Digipoten, Digifolin, Digalen, Digital, Digipuratum and a number of others. A good tincture will generally serve well. In some cases, infusions made from fresh leaves seem best. The point is to secure digitalization as rapidly as possible, and this is reached in from five to seven days. The remedy should be given fearlessly, if there are no symptoms of heart block or other contraindications.

Casting about for a remedy that can be administered where digitalis may not be advisable, we find a number of preparations that are more or less valuable. Camphor has been tried, but this remedy is difficult to use, on account of its insolubility. At any rate it has been used rather extensively and does not measure up to the standard desired. The purin derivatives are good

in some cases, and yet they have been disappointing in some ways. Caffeine is a very good heart stimulant, but it increases nervousness and tends to produce insomnia. Theobromin and theophyllin preparations are useful in cardiac pain, especially where there is a kidney complication. Strychnine is good in many cases, but it is cumulative and, in some cases, it disturbs the cerebrospinal centers, creating nervousness. There are a number of new remedies that are good, especially where angina pectoris is a well marked complication, as Euphyllin, Theocalcin and Theominal.

CORAMINE

But we have been in need of a universally useful preparation, somewhat comparable to digitalis, and that has been found in Coramine—a synthetic product, pyridine- β -carbonic acid diethylamid. Extensive animal experimentation has been made and now very considerable clinical use confirms those experiments. It is a cardiorespiratory and vasomotor stimulant and is a decided tonic to the heart. The results are immediate, in toning and regulating the heart. The pulse is not only regular, but fuller; a feeling of relief is noticed by the patient. It raises the blood pressure, when it is low or medium, and yet does not raise it when it is high. It stimulates kidney function and undoubtedly has a powerful effect in stimulating and stabilizing the endocrines. It has been found of great service in weak or failing heart from any cause, and it is especially serviceable in shock from injury and after surgery, and in collapse from anesthesia. It is serviceable in asphyxia of the newborn, in asthma and in carbon monoxide poisoning. It protects the heart in pneumonia, diphtheria, typhoid fever and other infectious diseases. It can be given intravenously, hypodermically or by the stomach. The dose is from 1 to 2 cc., and it can be given indefinitely without disturbance of the

stomach or nervous system, having that advantage over digitalis.

It is easy enough to see that a remedy that would raise blood pressure and maintain it at a satisfactory point, activating the functions of the endocrines and stimulating the kidneys, must relieve toxemia of all kinds and take the burdens off the heart, while it acts as a heart tonic.

RELIEF OF DYSPNEA

The surprising thing about this remedy is the relief it gives in dyspnea, which is altogether beyond what we expect from digitalis and other remedies. It is gratifying, sometimes, after having made every effort with digitalis and other remedies, to turn to this new preparation and find relief in orthopnea and other distressing forms of embarrassed breathing. It even gives some relief in that most difficult of all respiratory troubles, **Cheyne-Stokes respiration**. When a patient has gone for days, nights and weeks with dyspnea and smothering spells and is completely worn out from suffering and from inability to get any rest, this remedy will give him better relief than anything that has so far been found, when used freely and fearlessly. This can be stated emphatically from extensive clinical use.

Just what brings about this great relief in respiratory difficulties, is an interesting question. The probability is that it is due largely to stimulation of the endocrine functions. It should be remembered, in the first place, that the oxygenation of the blood is possible only through the secretions of the adrenal glands. We know that Coramine stimulates all three of the secretions of the suprarenals—lecithin, cholesterol and adrenalin—and it is through these secretions that the normal temperature of the body and proper blood pressure is maintained. It is equally sure that it stimulates the thyroid and parathyroids, for these secretions help to maintain the temperature and blood pressure; and the effect of the thyroid secretion would explain the increased diuresis. Animal experimentation shows conclusively that it stimulates the sex organs, and this would be a corollary evidence of the general effect upon the endocrines, including the pituitary. We must always remember, of course, the intimate interrelationship of all the endocrines. Evidently the general energizing effect of this remedy upon the endocrines,

with resultant chemical changes of the blood, operates through the breathing centers at the base of the brain, explaining the relief of respiratory difficulties.

Whatever the explanation, it is certain that we have here a remedy that will give great relief in embarrassed breathing in cardiac disease, whether complicated by nephritis or not.

Coramine may be given along with digitalis. A very good plan is to secure digitalization, perhaps in one week, and then give Coramine and digitalis during alternating weeks. The two remedies may be given together in emergency. For the failing heart, in suitable cases with serious complications, digitalis remains invaluable, but we have, in Coramine, a remedy that will render great service. It may be given for months without interruption, if need be, but it is well to come back occasionally to a digitalis week.

With this remedy, as with all others, it may be necessary, at times, to take the load off the heart by means of a moderate calomel purge or with magnesium sulphate; or with Diuretin, Sylargan, or Novosural, where there is a kidney complication.

It is to be hoped that the price of Coramine may soon come within the reach of the poor.

CASE REPORTS

The following cases are reported to illustrate the method of administering Coramine.

Case 1: Mrs. G. F. W.; age 66; family history good; complaint, utter breathlessness, insomnia and exhaustion.

Personal history: Eighteen years ago she had a severe attack of rheumatism. Later she suffered with pleurisy, without effusion. Her teeth have given some trouble.

Examination: Pulse, 104 to 112, extremely irregular; temperature, 97°F.; respiration, 24; blood pressure, 180/100. The urine shows a persistent trace of albumin; no sugar; microscopically negative; phthalein efficiency, 30 percent. *Blood:* Hemoglobin 88 percent; leukocytes, 11,800 (due to pyorrhea); red cells, 4,950,000; differential count normal. *Heart:* Cardiac area considerably increased—apex at fifth interspace, one inch to left of nipple line; right heart extends unduly over the sternal border; extreme irregularity is shown, by the sphygmotonogram, to be due to premature contractions and auricular fibrillation, with occasional heart block; volume of the graphic record deficient, on account of myocardial impairment; reserve power, poor. *Liver,* somewhat enlarged. Much gastrointestinal distention the whole length of the tract—stomach, jejunum, ileum and colon; almost pot-bellied. Pelvic organs, normal. Mouth shows some pyorrhea. Throat hyperemic, suggestive of a toxic condition.

Diagnosis, chronic myocarditis with complete decompensation.

The patient had been taking digitalis, interruptedly, for two years and recently it failed to relieve her. She was given Coramine, one-half teaspoonful (2 cc.) every three hours for several days, and then every four hours; later, 20 drops (1.3 cc.) three times a day. In addition to this she had a three-grain (0.2 Gm.) blue mass pill at bed time, to correct the liver and gastro-intestinal state.

As soon as she was able to get out of bed and gain enough strength to come to the office, she received slow sinusoidal current treatments to the cardinal points of the heart. The relief of the desperate dyspnea was immediate, even before it could be expected to come from bettering the condition of the heart muscle. It would seem that it must be explained by the effect on the endocrines.

After a week or two the improvement continued, on account of relief of the toxemia, the lowering of the blood pressure and increase of heart power. The heart was then perfectly regular. She has continued in good condition and the sphygmotonomograph shows no irregularity and much increased volume. After two months, complete compensation was secured, with greatly increased heart strength and good circulation. The breathlessness entirely disappeared and the patient was feeling well.

Case 2: G. E.; age 4½ years; family history good; complaint, complete breathlessness.

Personal history: She was a well developed baby at birth, but very cyanotic and breathless; cyanosis has continued during the whole life; always rather poorly nourished; has developed peculiarly—the head has maintained a steady growth, but the body is not well developed; had an attack of influenza ten months ago, which increased all her troubles and she developed nephritis. Three months ago had influenza again and suffered with vomiting spells and, at times, hematemesis.

Her breathlessness and cyanosis increased at this time and she developed a serious cough. The kidneys grew worse; the pulse was between 108 and 120; temperature, 97; respiration, 28; blood pressure, 60/40. The urine showed persistent indican and a large quantity of albumin; casts were found in one specimen. General anasarca was present. There was disproportion between the chest and upper abdominal development, due to some limitation of lung growth, and the waist measurement was excessive, on account of back pressure and the large liver. The lungs were clear, but small. Breathing was very harsh, owing to limited lung development.

Great cardiac hypertrophy was shown by the x-ray study, the heart being globular, with decompensation of the right ventricle; back pressure was evident everywhere. A rumbling systolic murmur was heard at the second interspace, on the left. The blood was characteristic of the condition—hemoglobin, 112 percent; red cells, 7,550,000; the leukocytes were low in this case, because of recent influenza.

Coramine was given to this patient in ten-drop doses, not with the expectation of obtaining any great benefit for the heart, but for some relief of the appalling dyspnea. The action was prompt and quite remarkable. The child gained markedly for a few weeks, showing some

improvement in the heart muscle, with marked relief of the distressing dyspnea, but died very suddenly, due to coma from nephritis.

The case is reported on account of its rarity and the relief of embarrassed breathing under great difficulties.

Case 3: L. H.; age 71; family history, good; complaint, persistent dyspnea, smothering spells, orthopnea, unable to lie down and sleep; continually jumping up, smothering.

Personal history: Tonsillitis occurred frequently in his early years. Thirty-five years ago he suffered seriously with inflammatory rheumatism, and again fifteen years ago. Twelve or fourteen years ago, when living high and committing some excesses, he had an attack of gout. He was declined for life insurance twenty-five years ago, on account of heart disease. Decompensation occurred soon after that, but restoration was secured in a few months and he was comfortable and active. He had a number of slight breaks in compensation a few years later, with similar results from rest and treatment. For the last several months he has been practically confined to the house and the bed, and quite recently is bedridden. He is troubled somewhat with indigestion—gas and distention—and is sleepless and exhausted.

Examination: Pulse, 96 to 112; temperature, normal; respiration, 20; blood pressure, 120/100. The specific gravity of the urine ranges considerably below the normal; no albumin, sugar nor indican; microscopically negative; phthalein efficiency, fair at 45 percent. Blood: hemoglobin, 70 percent; leukocytes, 6,800; red cells, 3,650,000; differential count shows 44 percent lymphocytes. General arterial change is observed, with pulsating blood vessels in the arms. *Heart:* The cardiac area considerably increased; apex at sixth interspace, two inches to left of nipple line; right heart extends unduly over the sternal border; no special increase in breadth at the base; distinct auricular fibrillation is found and is proven by the sphygmotonomogram, which also shows poor volume; a blowing systolic murmur is heard at the apex, transmitted toward the axilla and under the shoulder blade; no aortic regurgitant murmur; myocardial state and reserve power, poor. Great colonic distention is present throughout the whole length of the tract. *Diagnosis:* Myocardial impairment, with mitral insufficiency.

This patient was given Coramine, a half-teaspoonful (2 cc.) every four hours; a moderate dose of hyoscyamus powder at bed time, with one grain of calomel and a teaspoonful of sodium bicarbonate at four o'clock in the afternoon.

The first night there was less disturbance—not so many smothering spells; the second night the patient slept for eight hours, with only one or two smothering spells; the third night he slept eight hours, completely relieved of the orthopnea and all the embarrassed breathing, including the smothering spells. This relief, after weeks of orthopnea, was quite striking. General improvement followed, with better condition of the heart muscle, good circulation and improved functions, until, in a few weeks, he was out of bed, about the place and doing limited work.

On account of the patient's age he may break compensation again and he will have to be followed up carefully to prevent this; and as

age is largely a question of failure of endocrine function, he will be kept on organotherapy, chiefly suprarenal, pituitary and gonad sub-

stances, interruptedly, and the Coramine will be suspended.

214 Gibbs Bldg.

Tonsil Pathology in Relation to Age

Its Clinical Application

By JEAN DUPLESSIS, M.D., Chicago

THE PURPOSE of this article is to show that too much stress is being laid on enlarged tonsils in childhood and not enough on infected tonsils in adulthood. Stated differently, too many normal tonsils are being removed from children and too many diseased tonsils are being allowed to remain in the throats of adults.

In order to make this clear, it will be necessary to review briefly the changes which take place in normal and in diseased tonsils, from infancy to old age.

NORMAL TONSILS

The tonsils, like other lymph nodes, manufacture lymphocytes for the blood, and filter out and destroy bacteria, thus preventing their entry into the general circulation.

The tonsils differ from other lymph nodes, however, in that they have crypts. These crypts apparently serve as culture tubes in which bacteria multiply and from which they or their toxins are absorbed in small doses, thereby promoting the formation of antitoxins.¹

On this basis the pharyngeal, the tubal, the lingual and the palatine tonsils, forming Waldeyer's lymphatic ring around the pharynx, constitute the front line of defense against the first invasion of infection.

The tonsils are, therefore, of great importance during infancy and childhood, until the individual has developed an immunity against the bacteria of his environment. Does this explain why the eruptive fevers are so rare in those adults who escaped them during childhood?

Barnes² has shown that the enlargement of the tonsils in childhood is due to an increase in the number and in the size of the lymphoid follicles—a true hyperplasia. This may logically be considered as a compensatory process to meet an increased demand for defense against infection.

The enlarged tonsils of childhood are, therefore, normal tonsils under stress, and should not be removed unless they mechanically interfere with breathing, swallowing, speaking or hearing, or unless they become infected, as will be described presently.

After puberty, the lymphoid cells of normal tonsils begin to decrease in number so that, when full maturity is reached, the tonsils are small, containing very few lymphoid cells, and consisting mainly of their original connective tissue framework. Their task completed, they atrophy.

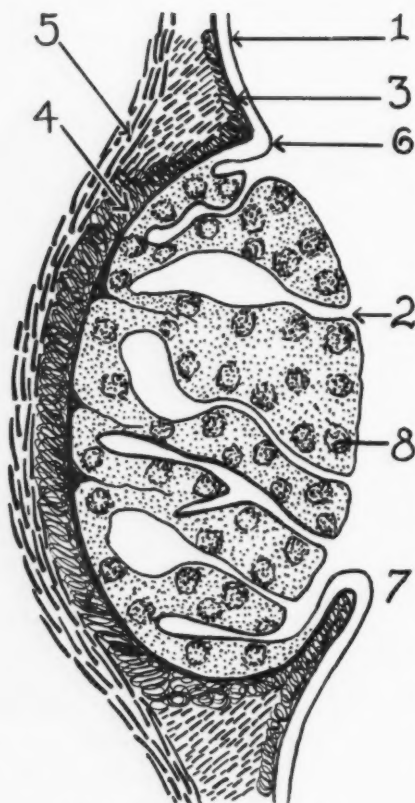
DISEASED TONSILS

If the enlarged tonsils of childhood become unable to cope with the bacteria entering the crypts, acute tonsillitis develops, runs its course and leaves a certain amount of damage in its wake. This renders the tonsils more susceptible, during puberty and adolescence, to recurring acute attacks which cause destruction, first in the protective cryptic epithelium, and then in the lymphoid follicles.

The destroyed cells are replaced by scar tissue, which seals over or constricts the crypts at different levels and forms adhesions between the plicae and the tonsillar surfaces. This causes retention of cryptic material, resulting in decomposition and in bacterial accumulation. The tonsils thus become still more susceptible to re-infection and even to paratonsillar infection. This stage of the process usually occurs during young adult life.

The scarred crypts are gradually converted into blind abscesses, and multiple small abscesses develop in the parenchyma. The superficial ones can readily be seen underneath the surface epithelium, but the deeper ones, like the blind cryptic abscesses, are revealed only by splitting the tonsils after enucleation.

By the time middle age is reached, the



CROSS SECTION OF RIGHT TONSIL
(Diagrammatic)

- 1.—Stratified epithelial layer of pharyngeal mucosa reflected into crypts.
- 2.—Crypts; branched, straight or coiled, penetrating to capsule; 15 to 20 in each tonsil; some distended with detritus.
- 3.—Basal membrane of pharyngeal mucosa, forming capsule which gives off trabeculae into tonsil, thus forming fibrous framework supporting lymphoid tissue.
- 4.—Submucosa of the pharynx; loose areolar tissue constituting line of cleavage for dissection, site of infiltration for anesthetic solution and site of pus in quinsy.
- 5.—Superior constrictor muscle of pharynx.
- 6.—Posterior pillar of fauces and plica.
- 7.—Anterior pillar of fauces and plica.
- 8.—Lymphoid follicles.

tonsils usually fail to react further, and a chronic, smouldering infection sets in. Thus originate the so-called "silent" tonsils of middle life.

At this age the systemic absorption is at its worst. The defensive mechanism has broken down—the filters have become clogged—and the tonsils are converted into open portals of entry for infection.

Gradually most of the lymphoid cells are destroyed so that, in old age, diseased

tonsils are small, hard masses, consisting almost entirely of scar tissue.

The length of time consumed to complete the degenerative process in diseased tonsils and the number of acute attacks, will depend upon the virulence of the bacteria and upon the degree of the patient's immunity.

DIAGNOSIS

Recurring acute tonsillitis is well recognized by the profession as an important cause of systemic disease, but the chronic type of infection is often overlooked, because it so seldom gives rise to active local symptoms.

In examining for chronic tonsillar disease, the following factors should be considered:

History: A history of acute tonsillitis or of quinsy is reliable evidence of tonsillar disease, but a negative history does not necessarily exclude it. Diseased tonsils are often removed from adults who give no history of acute sore throat. Patients may be inaccurate or forgetful.

Careful questioning will usually elicit the statement that the throat is "irritated" at times, or that it feels "tired" after much talking. Other patients tell of bad-tasting and ill-smelling "plugs" which are often dislodged upon coughing or upon clearing the throat.

Color: A vertical red streak of congestion along the border of the anterior pillar is a dependable sign of infection back of it. According to Lott,⁴ a narrow, well-defined, dark-red streak is typical of streptococcal infection; while a wide, diffuse, light-red streak indicates a predominance of staphylococci.

Size: The apparent size of the tonsils upon casual inspection, is often misleading. Large tonsils may protrude only slightly, because of deep tonsillar beds; while small tonsils may appear prominent, on account of shallow beds. Only when the patient gags do the outlines of the submerged parts become visible.

Caylor and Dick⁵ have shown that small, scarred tonsils, subject to frequent inflammations, harbor more pathogenic bacteria per gram than do large tonsils.

Crypts: The contents of the crypts, and especially of the superior tonsillar fossae, should be expressed for examination. If pus is found in this necrotic material, then the bacteria present should be considered virulent. The various strains of strepto-

cocci and staphylococci are usually the most numerous.

Extensive retention may be present in the deeper portions of the crypts without evidence on the surface. Cryptic retention can be recognized by careful inspection with the aid of a pillar retractor, by digital palpation and by transillumination.

Stumps: Tonsil stumps, remaining after incomplete tonsillectomy, usually contain scarred crypts. These harbor enough pathogenic bacteria to perpetuate and even to aggravate the systemic disease, for the cure of which the tonsillectomy was originally performed.

After the removal of such stumps, there is a striking improvement in the patient's condition, unless the secondary lesions have become irreparable.

These stumps are located most frequently at the base of the tonsillar beds on one or on both sides. They are readily removed by electrocoagulation or desiccation.

Rhoades and Dick¹ and other investigators examined a large number of adult cases and found that, in over 70 percent, the tonsils were incompletely removed. In view of this fact, the various published reports about the end-results of tonsillectomy cannot be accepted at full face value. Correct conclusions can be drawn from statistical studies only if they are confined to the results obtained from proven complete tonsillectomies.

The suction tonsillectomy technique of Waring⁶ makes possible a complete enucleation, even of badly adherent tonsils. It produces a minimum of trauma and is accompanied by very little hemorrhage.

Electrocoagulation, in skilled hands, is a safe office procedure which permits of complete extirpation while preserving the natural contour of the throat. It produces no hemorrhage, shock nor secondary infection, and does not interfere with the patient's business or social life.

Systemic Infections: Regardless of their appearance, the tonsils should be suspected in the presence of systemic infection, not accompanied by other foci in the upper orifices.

Suspected tonsils are always retained at a risk, because they may be contributing toward the development of chronic degenerative diseases, or to the localization of secondary foci of infection. Since no tissue is immune, the benefit of the doubt should be given not to the tonsils, but to the body as a whole.

Tonsils which are definitely infected should be removed, even in the absence of systemic disease, because there is no spontaneous recovery and, unless the absorbed bacteria are promptly destroyed in the blood and lymph, acute or chronic secondary lesions will sooner or later develop. A tendency to colds, cervical adenopathy, fatigue, vague aching or depression is often present for a considerable time before the secondary foci become established.

CONCLUSIONS

In adults with chronic degenerative diseases or with localized secondary infections, the primary foci in the teeth, the sinuses and the ears are less frequently overlooked than those of the tonsils.

Many adult patients are carrying around infected tonsils, either because they have not been thoroughly examined, or because they have refused tonsillectomy in the absence of sore throat.

These patients should be persuaded to submit to tonsillectomy before the secondary lesions become irreparable. The results will serve as a therapeutic test to prove that silent tonsils are important foci of infection more often than is generally realized.

REFERENCES

- 1.—Digby, K. H.: The Function of the Tonsils. *Lancet*, January 20, 1912.
- 2.—Barnes, H. A.: "The Tonsils," p. 52, Ed. 2. C. V. Mosby Co., St. Louis.
- 3.—Lott, H. H.: Tonsillar Focal Infections A New Diagnostic Point. *Surg. Clin. N. Amer.*, 1924, Vol. 4, No. 1, p. 66.
- 4.—Caylor, H. D., and Diek, G. F.: Quantitative Bacteriology of Tonsils. *J.A.M.A.* 78: 570 (Feb., 25.) 1922.
- 5.—Rhoades, P. S., and Diek, G. F.: Efficacy of Tonsillectomy for the Removal of Focal Infection. *J.A.M.A.* 91 1149 (Oct. 20.) 1928.
- 6.—Waring, J. B. H.: Suction Tonsillectomy. *CLIN. MED. AND SURG.*, May, 1930.

17 North State Street

PHYSICAL THERAPY AND RADIOLOGY

ASSOCIATE EDITORS

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Salutation

HERE, then, we present to the readers of CLINICAL MEDICINE AND SURGERY the realization of a dream!

Within the past decade, physical therapy and radiology have definitely emerged from even the penumbra of the twilight zone of Medicine and have assumed an importance undreamed of a generation ago.

While a number of men, many of whom will speak to you through these pages, from time to time, have devoted themselves to these lines of work as specialists, there is probably no type of therapy, except the administration of drugs, which is so universally applicable to the needs of the general practitioner as are the various physical agencies which are now coming into such wide use.

Because these matters are more or less new to many, and because success in their application depends so much upon the selection of the proper agency and its application according to an exact technic, we feel that much benefit will accrue to those who will study and follow the suggestions which will be made by those who have used these methods with satisfying results.

If the employment of x-rays and radium is not now so universal, because of the high cost of the equipment in the one case and of the element in the other, it still behooves every physician to have a clear-cut and exact knowledge of the types of disease in which these agencies possess diagnostic or therapeutic importance and of the results which may be expected from their use, in order that he may promptly and intelligently refer such patients as he is not equipped to treat, to those who have prepared themselves to do this work.

Moreover, serious efforts are now being put forth to find ways of reducing the cost of this type of treatment. Who knows but the next few years may see the office of every up-to-date physician equipped with the means of applying one or both of these agencies in the diagnosis and treatment of his cases?

No man, today, who does not have a sound and rational understanding of the theory and practice of physical therapy and radiology can truly be said to know modern Medicine, and we therefore have great joy and satisfaction in introducing to you the men who will assist us in making this new department a source of help and inspiration to every reader of this journal.

Friends, allow us to present the ASSOCIATE EDITORS—G. B. L.



Frank Thomas Woodbury, B.A., M.D., New York City, is a Lieutenant Colonel (Retired) of the U. S. Army, and the son of the late Dr. Frank Woodbury. He received his literary degree from the University of Pennsylvania and his Doctorate in Medicine from the Medico-Chirurgical College of Philadelphia. Almost immediately after graduation he joined the Army as a Contract Surgeon and served in the Boxer Uprising, in China, and in the Philippine insurrection. Later he was commissioned a First Lieutenant and passed through all the grades, including that of Colonel. After his retirement in 1922, he took up the practice of physical therapeutics in New York City. Colonel Woodbury's most conspicuous medical achievement in the Army was the demonstration of iodine as a skin disinfectant and of the prophylactic efficiency of solutions of sodium hypo-

chlorite against respiratory epidemics, especially influenza. The Colonel is a fellow of the A.M.A. and a member of the New York Physical Therapy Society; the American Physical Therapy Association; the American Medical Editors' and Authors' Association, the Association of Military Surgeons; the Military Orders of the Dragon and the Carabao; and of the Army and Navy Club of America. He is attending physical therapist to the Veterans' Bureau and the West Side Hospital and Dispensary; the author of a pamphlet on hygiene for enlisted men and a manual for officers; a frequent contributor to medical periodicals; and a member of the editorial staff of *Physical Therapeutics*.

Henry Schmitz, M.D., A.M., LL.D., F.A.C.S., F.A.C.R., Chicago, is of German birth and received his basic education at Krefeld and Karlsruhe, where he studied physics and chemistry, and his M.D. and LL.D. degrees from Loyola University, where he has been professor of gynecology since 1917. His Master's degree in Arts is from Valparaiso University. He is attending gynecologist at Cook County and Mercy Hospitals, consulting radiologic surgeon at Edward Hines Jr. Veteran's Hospital and was consulting radiologist at Augustana Hospital from 1921 to 1926. He is chairman of the Cancer Clinic at Cook County Hospital and director of the Chicago Cancer Institute, under the auspices of the Chicago Woman's Club. During the War he saw service as a Captain in Base Hospital Unit No. 11. Dr. Schmitz is the author or co-author



of several well known textbooks, notably "The Principles of Physics and Biology in Radiation Therapy," and of a considerable number of contributions to the periodical literature. He is a fellow of the A.M.A. and a member of the American Radium Society, American Association for Cancer Research, Chicago Roentgen Society, Radiological Society of North America, Physicians' Fellowship Club, American Medical Editors' and Authors' Association and a number of other societies. His chief hobby is indicated by his membership in the Chicago Equestrian Association. He is also a book collector, a mountain climber, a fisherman, and is interested in music.



Joseph E. G. Waddington, M.D., C.M., Detroit, Mich., is one of the pioneers of physical therapy. He holds degrees from the Indiana College of Medicine (Indianapolis) and Bennett Medical College (Chicago) and has done postgraduate work in the Polyclinic and Postgraduate Schools and Hospitals, of New York, in the Chicago Policlinic and the Illinois School of Electrotherapeutics, Chicago. He has also visited most of the important physical therapy clinics in Europe and America and has studied their methods.

Dr. Waddington has been a lecturer and teacher in the Western School of Physical Therapy, the American Physical Therapy Association and the American Congress of Physical Therapy, for a number of years. He is the author of the "Practical Index to Electro and Photo Therapy" (Margraf & Co., Detroit, 1929) and of many articles in current periodicals, and is an editorial consultant on several of the journals devoted to this specialty.

Wilbur H. Gilmore, M.D., Chicago, has secured his specialistic training in the difficult, but highly efficient school of hard experience. After graduation from Jefferson Medical College, he acted as assistant to a busy general practitioner for a year and a half, where he learned how to be a *real doctor*. He then formed a partnership for general practice, in which his wife (also an M.D.) later joined and, still later, a group was formed in which Dr. Gilmore did the x-ray work. He learned the job from the ground up, when the specialty was young, studied hard, by himself and under Case and others and, during the War, as a Captain, took the splendid course in roentgenology at Camp Greenleaf. He was secretary of the Illinois State Medical Society from 1913 to 1922, and is a fellow of the A.M.A., and of the Chicago Roentgen Society, a charter member of the Radiological Society of North America; and a member of the Medical Commission, Department of Registration and Education, of Illinois, and of the Medical Round Table of Chicago. Dr. Gilmore has worked so hard and so constantly that he has not developed a hobby, but he has gained a rich fund of human understanding.



THE BOWMAN, THE ARROWS AND THE TARGET

WE CAN all look back to the dark ages of medical practice, when the patient suffered under the indignities of an obnoxious mixture of empiricism and gross ignorance, masquerading as heaven-donated wisdom. We are all still suffering from the modern forms of this type of practice which, we regret to say, is in part sustained by public demand.

Of the two, empiricism is the more respectable, since it does imply an intelligent

recognition of coincidences and the value of meticulous observance of conditions and relationships between the remedy and the disease.

The resort to hot springs and spas for painful joints; the use of "Jesuits' bark" for the calentures of the New World; the inclusion of foxglove in the old woman's dropsy potion; the cure of the pox and clap by a violent attack of malarial fever, are but a few of the many well known instances of empirical practice..

The great strides in medical knowledge, made even since our fathers sat upon the Aesculapian forms, have been due to the adoption into daily use of scientific methods of inquiry, dependent upon the invention of instruments of the greatest delicacy and refinement for measurement and detection, as well as a vast array of pharmacologic and physio-therapeutic aids of known virtue and accurate application.

As a result, the hot springs have yielded up their saline and radioactive secrets; foxglove becomes digalen or other potent preparation, standardized in cat units; "Jesuits' bark" yields the plasmodicidal alkaloid quinine; and the high fever of an accidental or deliberate malarial infection is succeeded by the controlled pyrexia from high-frequency electromagnetic fields, to overcome the treponema and the diplococcus.

This is all because the modern physician refuses to be content with empiric methods; even though he values them and uses them, he desires to know the nature of the cause and the reason for the effect. From the enquiry into the fermentation in beer and the wilting of grape vines, we come to antiseptic and finally aseptic surgery, on the one hand, and antitoxins and bacteriophages on the other. The discovery of the fixation of dyes in bacterial preparations for microscopic examination produces, eventually, sulpharsphenamine and mercurochrome. The sparks of the induction electric machine evolve, in time, into the decongesting, high-tension currents of the electrostatic machine and the thermotherapeutic electromagnetic treatments from radiofrequency condensers, not to mention

electrosurgery and the radiobroadcasting of medical lectures.

Applied science is, then, the keynote of modern practice which, however, can never divorce itself from the observant eye at the bedside. But this applied science must, in all its phases, have but one object—the relief of the disease and the cure of the patient. Therapeutics is the sole reason for the office of the physician. If he has no remedy to suggest to relieve suffering; if he has no weapon with which to combat infection; if he stands helpless in the presence of a disability or cannot support and fortify the failing forces of nature in the struggle with premature death, he may be a chemist, a physicist, a pathologist, a diagnostician, but he is not a physician. Ailing humanity wants physicians!

The most blighting criticism that can be made of modern medical teaching is that it produces therapeutic nihilists and exhorts surgery, which has to cut out and throw away what it cannot cure. Such a state of affairs should rate a medical school as zero Z. It is erecting arches without keystones.

As a result, postgraduate study has had to make up this deficiency, and much of this is done in the pages of our medical magazines. This new department of Physical Therapeutics and Radiology will emulate the high class of service instituted and maintained by CLINICAL MEDICINE AND SURGERY and, realizing that disease is the target, therapeutics the arrows and the physician the Bowman, it will strive to put valuable missiles into the hands of the Bowman, with all candor and without prejudice.

FRANK THOMAS WOODBURY

AN OUTLOOK IN CANCER THERAPY

WHEN Wood and Prime, in 1922, published their experimental findings that rat sarcoma could be completely destroyed by 5 to 7 erythema doses of radiations, and concluded that the lethal radiation dose for human carcinomas would probably be the same, a basis had been formed upon which to evolve a technic of radiation therapy which would change the temporary relief obtained by a single erythema dose of radium or x-rays into a permanently good end-result, by an increase

in the radiation dose delivered into the tumor tissue.

It has been empirically observed that the results of radium treatment in carcinomas of the cervix were permanently curative, due to the fact that an enormous amount of milligram-element-hours of radium could be applied. Depending on the palpable and visible extent of the growth, the percentages of five-year good end-results are from 65 to 85 percent, in the clearly localized or Clinical Group 1 carcinomas; from 25 to

55 percent in the doubtfully localized or Clinical Group 2 carcinomas; and from 10 to 15 percent in the clearly invasive carcinomas, characterized by invasion of the parametria or regional lymphnodes and mobility of the entire tumor mass, though mobility was limited, due to a loss of elasticity of the connective tissue. Such cases are placed in Clinical Group 3. Temporary palliation, as cessation of bleeding and arrest of infection, was the only hope for patients with a fixed pelvic carcinoma.

The absolute curability percentage of radium treatment in cervical cancers has been shown to equal that obtained by surgery. Thus the patient could be saved from the immediate high surgical mortality and the prolonged siege of convalescence. It would lead too far to discuss physical measurements of equal intensity curves of radium and x-rays, to demonstrate that the periphery of the uterus receives about 4 to 5 erythema doses, proving as correct the findings of Wood and Prime concerning a lethal cancer dose.

To an unbiased observer, the statement is clear that the average results of the treatment of cancer in other regions of the body do not show such uniformly good end-results as those obtained in carcinomas of the uterine cervix.

In 1925, Quick and Martin and Pfahler and Wiedmann published their observations on and practicability of the combined use of radium and x-rays in head cancers and pelvic cancers respectively, a method which had been instituted in our clinic in 1914. Recently, Quick and Martin published a study on the lethal tissue dose for oral cancers. In the transitional or round-cell carcinoma, the lethal dose appears to be 2.5 erythema doses, and for squamous or prickle-cell cancers, 8 to 10 erythema doses.

The progressive evolution of cancer therapy in these two important regions of the body was made possible by surgeons of undoubted surgical ability, as Kelly and Burnam, Quick and Martin, Lee, Ward, J. G. Clark and Pfahler, amongst others, who, in addition to their clinical knowledge and surgical ability, acquired a thorough knowledge of radiation therapy.

These facts have been recognized by the American Society for Control of Cancer and the American College of Surgeons. The societies are of the opinion that the treatment of cancer must be entrusted to those physicians who are equally well trained in the surgical technic of radical cancer eradication and in the application of radiations, either by seeds intratumorally, or by surface and distant radiation. Only thus can the cancer patient receive the benefits of either method of treatment, alone or in combination, according to standardized indications based on the location and extent and the histologic character of the growth.

The new era of the cancer specialist is surely entering the medical field and the good end-results of cancer treatment should obviously improve, since these men will rapidly teach the general profession the detection of early, incipient malignant tumors.

These thoughts will express the necessity for a modern medical publication to include a department of radiology in its journal. The thoughts also give an index of the articles that will appear to familiarize the practitioners with the value of radiation therapy in the fields of medicine—certainly a laudable undertaking of CLINICAL MEDICINE AND SURGERY.

HENRY SCHMITZ

INTRODUCING A VENERABLE YET VIRILE AND REJUVENATED THERAPY TO FRIENDS, ACQUAINTANCES AND STRANGERS

PHYSICAL therapy—the therapeutic utilization of natural or physical agencies, in contradistinction to surgical and strictly chemical or drug agencies, is as old as the Creation. Adam and Eve, during their pristine days in the Garden of Eden, exposed their nude bodies con-

tinuously to the beneficial action of the sunshine and the breezes. As the primitive curse initially involved secluding the formerly and freely exposed anatomy within "coats and skins," it would require no theologian to demonstrate that clothing is by no means an unmixed blessing; however,

this is not intended to be an appeal to Holy Writ to substantiate the virtues of primitive versus civilized life, but is an introduction to this newly inaugurated department of physical therapy.

Baths, douches, enemas, fomentations, poultices, "rubs" (medicated and unmedicated), gymnastics, outdoor exercise (walking, riding, golfing), are only some of the innumerable forms of natural therapy which have been recognized—consciously or unconsciously—and more or less utilized by everyone of us. Somewhat recently all these various and varied forms of mechanical, electrical, thermal and photo therapy have been cognitively baptized under the extremely inclusive and flexible term: physical therapy.

The distinctive and important difference between this therapy of today and that of the past decade or decades is the development of assured beliefs and more refined and scientific methods of application, to replace crude, unscientific methods and uncertain beliefs. The superficial, conductive heat of the poultice and hot water bottle is now more penetratingly and beneficially replaced by infra-red rays and diathermy; the high and the low enema, which is so spasmodically contraction-producing, yet inefficiently effective, is still surprisingly favored by an orthodox, as well as unorthodox, clientele, which has not yet become acquainted with the more logical and precisional "colonic

irrigation;" the multitudinous "shakers" or "exercisers," with their uncontrolled pervasive vibration en masse, are now analytically and scientifically apportionable into delicately controllable and applicable vibrators and "articulators" or "tractors," by means of which latter, any degree of rhythmic contraction and relaxation may be applied to any and every part of the body, with the amount of pull graduated from half a pound up to any physiologic extent deemed desirable.

But an introduction is not presumed to impinge upon that which is to be introduced, therefore, our esteemed contributors will expound to you, month by month, the theory, practice, indications and contraindications, appertaining to this integrant, indispensable to a medical integral. The old and established; the new and not yet so firmly established—if backed with sufficient intelligible and intelligent data; clinical reports, from those who can and will supply concise and definite case histories, accompanied with precise details of the physical agency or agencies employed, all these will be welcome contributions to this department.

The one and only purpose for this departmental inauguration is:

"To serve nobly in the common cause,
Be true to science, but not its slave."

JOSEPH E. G. WADDINGTON

The Roentgenologist*

By W. H. GILMORE, M.D., Chicago

Attending Roentgenologist to the Illinois Masonic Hospital & Illinois Eye & Ear Infirmary.

A DISCUSSION of the position of the roentgenologist, in this advanced age of diagnostic medicine, should be trite, but the many laymen who have entered the technical side of roentgenology, who maintain so-called commercial x-ray laboratories, and who presume to advise medical men as to the proper interpretation of x-ray shadows, is so great that I feel it will not be amiss to attempt to differentiate between a grad-

uate physician, skilled in the use of the x-rays, and a mere film maker, or technician.

The roentgenologist, as defined above, is a consultant and it is his duty to point out, to the attending physician or surgeon, any abnormality which may appear under the screen or on a film, and to assist the attending man in making his diagnosis. At no time is it the function of the x-ray consultant to make the diagnosis, as this is entirely the duty of the physician in charge of the case.

* Read before the Medical Round Table of Chicago, April 8, 1930.

Consider, if you please, the large number of specialties in modern medicine, and then think how absurd it is for any x-ray man to expect to be as proficient in all of them as is the individual who has devoted his entire professional life to one line. Yet that is the position the diagnosis maker assumes and is the reason why competent x-ray services should consist only in pointing out definite shadow abnormalities. To do this intelligently, a medical education and rather wide experience are necessary.

To a man or woman devoting his or her entire time to the study of the x-rays, the commercial laboratory is the worst sort of unfair competition, as too many medical men refer their cases to the place where "pretty" films are produced at the lowest cost; and too many of them, where a check covering their "split" is forthcoming on the first day of each month. The real value of scientific x-ray study is thus made subordinate to dollars and cents. This sort of thing cheapens the entire specialty and makes it more difficult to interest the young man in this branch of diagnosis.

The roentgenologist occupies the same position as does any other consultant, and his remuneration should be based upon his experience and reputation, not on so many films at so much per film. The opinion of such a man on any given question is, or should be, of much greater value than that of one of limited experience.

There is also a great tendency, on the part of many men, to make the x-ray findings the "court of last resort," and it is the members of this group who usually have most to regret. That the x-ray and physical findings must coincide is, I feel, a safe maxim to follow and, in my own practice, if this is not true, I feel that the burden of proof is upon me. X-ray findings are, I believe, the most valuable aid in arriving at an intelligent diagnosis; but woe to the man who puts his faith on shadows alone!

In this connection I wish to relate two cases which have come to my attention very recently. In one, two small areas of calcification, in the region of the lateral ventricles, were present on films of the skull. The surgeon in charge of the case attempted to remove them. The patient died on the table. In the second, a sur-

geon, who has his x-ray work done in his own office, had his technician give the patient a glass of barium mixture and make a film of the stomach. Enough time was consumed in this process to outline the peristaltic wave on the film, giving several shadows of different densities. A diagnosis of carcinoma was made and operation was advised. The patient accepted and, of course, only a normal stomach was found.

FACTORS IN X-RAY DIAGNOSIS

In the interpretation of x-ray films, a number of factors should be considered and, for the sake of convenience, I have listed them as follows:

- 1.—History.
- 2.—Physical findings.
- 3.—Position of the patient and direction of the central ray.
- 4.—Density and detail of the film.
- 5.—A knowledge of normal x-ray anatomy.
- 6.—Possible congenital malformation.
- 7.—Common tendency to see too much.

It is manifestly impossible to discuss any of these divisions at any length and I shall only attempt a bare statement of fact and illustrate each point.

History and physical findings need little discussion, as the facts, obtained in a carefully taken history and brought out in a careful physical examination, are the basis of every x-ray study and are of paramount importance. In any but the very simple cases, they must receive most careful consideration. The sooner the roentgenologist learns that he must approach his case from the clinical side, the better for every one concerned.

Not long since, films of a pelvis and lower lumbar back, together with what purported to be a complete record of the case, were sent to me for an opinion. Four gentlemen had described a fracture of a transverse process, seen in the films which were made six months after the injury, which was clearly a shadow of gas in the gut, and all of them overlooked a mass of new bone formation in the acetabulum on one side. In all the so-called examinations, not one word of history or physical findings was mentioned. The entire opinion was based upon what they thought they saw in an x-ray film. The patient had been sent to them for exam-

ination and not for x-ray interpretation, the films accompanying the patient as part of the record.

In attempting to interpret an x-ray film, the projection of the *central ray* and the *relation of the part to the sensitive film* should always be kept in mind.

One of the basic rules, in all standard positions, is that the central ray must pass through the part at an angle of 90 degrees to the film or plate. There are a few instances in which distortion must be accepted, in order to secure the shadow of some region without superimposed shadows. This is commonly seen in the raying of the inferior maxillary bones and in the different angulations which best bring out the individual paranasal sinuses.

Frequently, through ignorance, and occasionally for other reasons, ridiculous interpretations are given and even court testimony of this sort is not uncommon. More than once, operations have been done when the shadows of a mass of calcified glands in the mesentery have been projected on the shadow of a normal kidney, and intracapsular fracture of the hip has been reported and sworn to, when the apparent shortening of the neck of the femur was due entirely to eversion of the thigh. When interpreting pelvis and hip shadows, one should always be sure that the feet were *tied together* when the film was made, or the shadows of the femoral necks may be much shortened.

The *density and detail* shown in the film must also be considered, as here, again, some very valuable shadows may be lost, or unusual film defects may be read into the film as pathologic changes. This is very beautifully demonstrated in chest films for soft parts. Immeasurably more may be seen in a soft film of but little density than can be made out in a "beautiful," contrasty one, in which bone detail is excellent. Many times an arthritis or the very early callus formation in fractures is lost, because the film is too "beautiful".

CONGENITAL VARIATIONS

A man may be a most excellent anatomist, as the term is commonly applied, and still find the proper evaluation of x-ray shadows difficult. This is startling in studies of the stomach, for the live stomach is a very different affair from the ones most of us studied while in medical college. This organ may lie anywhere be-

tween the diaphragm and the pubis, and still be perfectly normal *for the individual*. The stomach of the short, thickset individual is much different from that found in the asthenic type, and there is no reason why one should not have a long stomach, any more than a long nose would be considered pathologic, if it conforms to his or her general physical makeup. It has been only in recent years that text books on anatomy have taken this fact into consideration and have differentiated the live from the dead viscus.

This lack of knowledge has caused many ludicrous as well as serious mistakes. I have heard men qualify as competent to interpret x-ray films, and then swear to the most absurd statements. On one occasion, a man testified that the shadow of the frontal sinus, as shown on a lateral film, was a hole in the cranium; and another, that the shadow of the glenoid fossa, showing through the head of the humerus, in an excellent film, was a fracture of the head.

Another source of grave error is found in congenital malformations which are encountered so frequently. Articulations in the transverse processes of the first lumbar vertebra, forming lumbar ribs; the many different forms assumed by the fifth lumbar; giant sacralization of one or both transverse processes of the fifth; the first and second segments of the sacrum sometimes forming almost complete vertebrae; and the different degrees of spina bifida have all caused serious difficulties, to men not accustomed to seeing this variation from the usual. There is no part of the body which is free from these "quirks of nature," and this fact should always be kept in mind.

Another more or less common abnormality is the forming of the *os trigone* from the posterior process of the astragalus. Very few roentgenologists and industrial surgeons have escaped having this little trouble-maker worry them at some time, when studying the films of an ankle injury. However, it usually happens only once.

A short time since, one of our prominent surgeons came to me with several films of a pelvis, which had been interpreted as showing a fracture of the acetabulum. Several men of more than average ability had overlooked the fact that the several films, made at different dates over a period of six months, all

showed exactly the same shadow. I expressed the opinion that the so-called fracture was, in reality, due to an abnormal ossification of the acetabulum and, upon investigating the development of the region, the same abnormality was described. Yet the misinterpretation caused the expenditure of quite a large sum of money before the case was finally dismissed.

Probably the source of most trouble in x-ray interpretation is the inherent tendency, in all of us, to *see entirely too much*. One may have years of experience, but this fact must always be kept in mind, or we shall be guilty of what may sometimes be a very serious error. True, the more years one spends in studying the x-ray shadows, the less likely one is to make this mistake, but the danger is always very real.

When we consider the intricate struc-

ture of the human body and the many variations which may be present, all within normal limits, and the many pathologic changes which may occur, and then try to separate all the shadows on the film, due to both normal and abnormal conditions of structures, is there any question that the man rendering the service should be medically trained?

There has been no attempt to present here a scientific treatise, but I have tried to give the viewpoint of the physician who is trying to specialize in the honest use of the x-rays. It has been possible only to generalize, in this discussion, but, if the points which have been raised are true, how can the nonmedical individual render the service which the attending physician should receive and must have, if the man who pays the bill is to get what is due him?

185 N. Wabash Ave.

Facial Palsy*

Its Treatment by Physical Measures

By CURRAN POPE, M.D., Louisville, Ky.

Medical Director, The Pope Hospital, Inc., Louisville, Ky.

THE SEVENTH nerve is a mixed nerve. Its motor fibres arise from a nucleus of cells situated in the *formatio reticularis* of the lower level of the pons, behind the superior olivary body and between the fibres of the sixth and lower sensory root of the fifth nerve.

In the internal meatus it is joined by the *pars intermedia*, which originates from a ganglionic root and is sensory. It passes through the internal auditory canal, giving off the small superficial petrosal nerve, which joins and terminates in the tympanic plexus. In the canal it gives off the chorda tympani nerve, enters the tympanic cavity, running on the inner side of the *membrana tympani*, ensheathed in mucous membrane, and passes to the manubrium of the malleus, just above the tendon of the tensor tympani. Leaving the tympanic cavity, it passes to the base of the skull, then downwards and forwards; it reaches the posterior

border of the lingual nerve and submaxillary ganglion. Where it reaches the anterior two-thirds of the tongue, it is an afferent nerve and is associated with the sense of taste. The nerve comes out from the stylo-mastoid foramen and turns around the outer base of the styloid process, dividing into its cervico-facial and temporo-facial terminal divisions.

The facial nerve is the motor nerve of all of the muscles of expression; it also supplies the platysma and buccinator muscles, the muscles of the external ear and the posterior belly of the digastric and stylohyoid muscles. Roughly speaking, its fibres divide into three anatomic-functional divisions, supplying expression and movement to the upper, middle and lower face, together with the muscles of the ear and the digastric and stylohyoid muscles. It is probably the most frequently paralyzed nerve of the body.

A capsular or cortical lesion of this nerve usually affects the lower nerve distribution

*Read before The Louisville Society of Medicine, April 3, 1930.

—the eyes can be closed and the forehead wrinkled. It may be affected in pontine lesions, in which case the palpebral fissure may be widened or narrowed and the outer angle of the eyebrow lowered. In paralysis agitans it is affected bilaterally, producing the "wooden facies," due to inelasticity rather than to paralysis. In polio-encephalitis it may be affected. In nuclear lesions taste is not affected. It is often paralyzed in fractures of the skull. Bilateral paralysis has occurred in postdiphtheric paralysis, basal meningitis (especially syphilitic), encephalitis and otitis media. Cerebral or supra-nuclear lesions are nearly always accompanied by facial palsy. Nuclear paralysis is rare. It is usually a part of glossolabial palsy, of infective origin, such as that following diphtheria, or from some gross lesion of the pons. About eighty (80) percent of the cases are peripheral.

ETIOLOGY

The commonest cause of facial paralysis is exposure. My experience has shown that more cases occur when one enters a motor car, a train or railway coach, perspiring, is seated by a window and allows a concentrated draft to blow on the side of the face. The maximum draft and concentration is usually about the stylo-mastoid foramen, owing to the position of the head, when seated near a window.

It is said that rheumatic influences play a part. This is true if, by rheumatic processes, we mean a general infection or toxemia of any kind. After this come trauma, syphilis, ear disease and cerebral tumors.

Males are much more frequently affected than are females. Of the last twenty (20) cases treated, all have been males. This may be due to the fact that males travel much more than females and are therefore more exposed to the causative influences.

The commonest age is between twenty and forty-five. Most of my recent cases have been between twenty and thirty-five years of age.

Season has its influence. Cold air, blowing upon a moistened or non-moistened surface, is much more effective than milder or warmer air.

It may occur in multiple neuritis, but I have seen no cases. Several (5) of my cases followed so closely after influenza that I am constrained to believe that this

infection acted as a predisposing cause. Trauma may be manifested by pressure, by blows or by operations upon the mastoid or ear. It may occur after an operation upon the gasserian ganglion.

ONSET

The disease, as a rule, comes on rapidly. For several hours, or possibly part of a day, the patient experiences "peculiar" feelings in the region of the affected side; occasionally pain, in or anterior to the external auditory meatus; and, upon awakening in the morning, finds one-half of the face paralyzed. There is usually a sensation of subjective discomfort in the paralyzed side. The patient notices that he can not completely shut the eye, that movement is lessened and that food lodges between the teeth and cheek, so that chewing is difficult.

SYMPTOMS

The appearance of the face is almost characteristic. On the involved side, the face appears flat and the normal folds or wrinkles are smoothed out. The mouth is drawn to the sound side and the tongue is not protruded straight. If emotional states are tested, such as laughing, whistling, puffing out the cheeks, closing the eyes, frowning, showing the teeth, etc., the condition is most plainly shown. An attempt to move the angle of the mouth is a good test.

The eye on the side of the paralysis is uncovered, the white shows plainly and the eyeball turns upward. The nostril of the affected side is partially collapsed and does not expand on deep inspiration. The eye waters and the patient constantly uses his handkerchief. The conjunctiva becomes injected and inflamed. There may be considerable pain in and about the ear and occasionally an herpetic eruption on the ear or in the canal. Hunt has called attention to these symptoms and pointed out that they are due to an inflammation of the geniculate ganglion, which has extended and involved the facial nerve. There may be loss of taste on the anterior two-thirds of the tongue on the affected side. The three branches of the nerve are usually involved. The face looks flabby and the naso-labial line is smoothed. There is a general feeling of discomfort and stiffness.

PATHOLOGY

Eighty (80) percent of the cases are due to a peripheral neuritis, accompanied by

complete or partial degeneration of the nerve in the affected part. Those cases due to cerebral causes are usually syphilitic or tuberculous and result from a basilar meningitis, growths, etc., the pathology of which is a degeneration, plus the syphilitic condition that is provocative. It is a diffuse neuritis. There are congestion and swelling of the nerve, which may cease at the stylo-mastoid foramen or may invade the aqueductus Fallopii. If it starts in the canal, it extends downward. If the condition is due to a growth in the brain, we may look for headache, vomiting and choked disc. Taste is unimpaired.

DIAGNOSIS

Diagnosis of the condition is comparatively easy. Tests of the emotional states, contortion and whistling will usually suffice. In children more care must be exercised. Localization is important. If the lesion is supra-nuclear, that is between the cortex and the nucleus of the seventh, the paralysis does not involve the upper third—the patient can close his eyes and wrinkle his forehead and the reactions of degeneration are not present. If the lesion is in the nucleus itself, there is associated paralysis of the sixth nerve and, furthermore, taste and hearing are involved. If the lesion is basilar, at the emergence of the seventh nerve from the medulla, taste is not involved but usually the eighth nerve is affected and there is deafness, sometimes tinnitus, on the affected side. If the lesion is within the aqueductus Fallopii, between the geniculate ganglion and the point of exit of the chorda tympani nerve, there is loss of taste on the anterior two-thirds of the tongue of the affected side. The tongue may be heavily coated on this side. If the lesion is high in the canal, we may have hyperacusis to loud sounds. If it involves the peripheral nerve, to and including the stylo-mastoid foramen, there is complete paralysis of face, but no disturbance of hearing, taste, etc.

The state of the peripheral nerve can be largely determined by testing with the faradic and galvanic currents. In these tests, we have three factors:

- 1.—The current (galvanic or faradic).
- 2.—The poles (positive or negative).
- 3.—The modal reaction (quick or slow).

Normally, muscles that react to the faradic current, respond better to the negative than to the positive pole and their mode of reaction is quick—almost jerky.

It is the changed electrical reactions that determine the state of the nerve. The **reaction of degeneration**, typical of degenerative neuritis, consists of response to the galvanic current, greater to the positive than negative pole, and a slowed contraction of the muscle.

PROGNOSIS

In supra-nuclear paralysis, the prognosis is that of the disease (tumor, hemorrhage, softening, etc.) producing the paralysis. My experience has been that, in syphilitic cases, where diathermy and galvanism (heating plus ionization) are applied to the cerebrum, the results are usually satisfactory, if the cases can be secured early enough.

Peripheral cases usually recover, if correctly and promptly treated. If this is not the case, the observable defect may become the basis of a marked inferiority complex. I have seen four such cases, and have re-educated them into normality. One broke down the barriers recently and is, at present, undergoing re-education treatment.

DURATION

The duration of these palsies is usually three months or more. Some cases do better than this, but it is not safe to make any promises under the above period. Duration can best be determined from the electrical reactions. The more marked the reaction, the more serious the outlook and the longer the duration of treatment.

TREATMENT

The treatment of nuclear growths, hemorrhages, softening, etc., as well as nuclear disease, will not be considered here.

Cerebral syphilis is best met by anti-luetic treatment and the application of diathermy and galvanism to the cerebrum, of which I have spoken. (*West Virginia Med. Journal*, 1928).

Traumatic cases require full consideration of the causative factor. If the nerve ends have been severed by operation, they should be restored by uniting the proximal and distal ends. If this cannot be done, an anastomosis with one of the cervical or the hypoglossal nerve may give satisfactory results. In cases that are not amenable to medical treatment, surgery should be tried. The ideal treatment of peripheral or Bell's palsy might be described as follows:

The patient, if seen a few hours after

the onset, should be given calomel, followed by a brisk saline laxative. A diuretic is prescribed for the first few days or a week. The patient is instructed to wear a shield over the eye and, two or three times daily, to drop in the eye sterile castor oil, at the same time massaging the lids. He is instructed to make alternate applications of hot and cold water to the entire side of the face, with large turkish towels, one hot (one minute) the other cold ($\frac{1}{4}$ minute).

He is then given daily incandescent electric light treatments, from a 1,500 watt bulb, to the side affected, for ten or fifteen minutes, followed by diathermy, with one pad on the mastoid of the affected side, the other on the cheek of the unaffected side, giving 300 to 500 milliamperes of current for ten minutes, followed by gentle electric stimulation of the affected muscles, two or three contractions each. The electric treatment must be very carefully given and great care taken not to overexercise the muscles.

Later, massage must be instituted, and should be given, once daily, by one trained in the art. Both sides and the neck should be treated. This restores the function of the paralyzed side and prevents the contracture of the normal side. Movements should be from chin to mastoid. Stimulation by the negative pole of the galvanic current should be continued until contraction takes place with the faradic.

Even after apparent recovery, one or two treatments weekly should be instituted upon, until no regression is noticeable.

The medicinal treatment is limited—iodides and strychnine. After the acute stage, salicylates are recommended, but I have seen little if any good from them.

The following brief case histories are presented:

CASE REPORTS

Case 1.—This was a woman, age 28, who had been fairly healthy until she developed mastoiditis. This was operated upon by one of our most competent surgeons but, as a result, there was a paralysis of the right side of the face, involving the three levels and presenting the typical emotional and muscular defects here mentioned. As the paralysis came on very suddenly, it was quite evident that the nerve had been injured or cut during the operation.

The case went for some time without operation and, when first seen by me, showed marked paralysis of the right side and contracture on the left. The case was not a promising one and the patient was frankly told that it would take at least 12 months to do anything, if anything could be done.

Hot applications and the incandescent, 1500-

watt lamp, were applied to the entire side of the head, followed by manual massage (which I administered) and very gentle electric exercise of the facial muscle. I also had a silver hook made for the angle of the mouth and this was worn, when at home, to draw the mouth into position.

To show what can be done for an apparently helpless case with a hopeless outlook, I will say that, at the end of 12 months, great improvement had taken place but, though the treatment was continued, off and on, during the next year, a perfect recovery was not obtained. At rest and in ordinary talking, the condition is not noticeable. If the patient laughs aloud or strains the face, a moderate defect is seen.

This is the worst case that I ever saw and represents a result far beyond what could be anticipated. The loss of three months, at the start, really amounted to a tragedy in this case.

Case 2.—This was a man, age 57, married, who had always been healthy and, as a rule, had paid very little attention to personal exposure.

He perspired very freely during the summer months and, one evening, was lying down with an electric fan blowing directly upon his head and neck. He went to sleep and probably remained in this position for a number of hours. On awakening next morning, he complained of a good deal of stiffness in the side of the face affected, and attributed this to a rheumatic condition, brought about by the electric fan and the chilling to which he had been subjected.

In the course of three or four hours, paralysis set in and the condition became plainly marked. He could not close the eye, which watered, and paralysis, with all the emotional expression loss, appeared upon testing.

As he had previously been a patient of mine, he came to me and I immediately instituted the measures mentioned in the treatment of these cases. I explained to him that he might have a complete degeneration of the nerve and that he would probably get much worse. This turned out to be true. By the end of the second day, a partial reaction of degeneration was present.

With the subsidence of the acute symptoms, electric treatment, by galvanism, was begun and he was given daily treatment for six weeks; then three times weekly, for eight weeks; then twice weekly for six weeks; and was then observed once every two weeks and treated for two months, at the end of which time he had made a complete recovery. He has had no recurrence and remains well at the present time, after nearly nine years.

Case 3.—This man, age 59, very strong and healthy, had not been sick in a period of ten years. He had however, been strained and emotionally upset over the protracted illness and death of his mother, with whom he lived.

He awoke one morning with complete paralysis of the left side of his face and could ascribe no cause for the condition. The three levels were involved and the usual disturbance of expression and movement was present. There was no loss of taste, and electric tests showed a partial reaction of degeneration.

He was given galvanic stimulation to the facial muscles and his improvement became noticeable within the first two weeks. At the end of a month, the treatments were reduced to three a week, and during the next month to twice a

week. At the end of the third month, he was, to all appearance, completely recovered. For precaution's sake he was given several treatments every two weeks, in order to keep him under observation. He has remained entirely well for three years.

Case 4.—A young man, aged 26, a salesman riding about in an automobile, came out of a store perspiring moderately and, while he was driving to the next customer, the motor became too warm for him and he lowered the window, permitting a cold, damp breeze to blow directly

upon the side of his face. By night he had a complete paralysis. Another patient whom I had cured of facial palsy saw him next morning and referred him to me.

The same course of treatment was pursued as in Case 3 and, in two months, he was apparently completely restored. This was about four months ago and the patient has remained entirely well.

Attention should be called to the fact that early treatment is a *sine qua non*.

CLINICAL MISCELLANY

Zinc Ionization in Chronic Empyema

CHRONIC empyemas are, and have been for years, one of the bugaboos of the profession. Beginning, so far as one may observe, in the classical fashion and going on to an incision or possibly a rib resection, in the hope of a speedy relief and recovery, these conditions do not recede beyond a certain degree. From then on they persist as an intra-pleural pocketing, carrying a low-grade bacterial flora and defying the efforts of the attendant to control their baffling persistence. The patient, thereafter, becomes a rather pitiable object, incapacitated, to a large extent, from any useful occupation and a burden to others as well as to himself.

In such conditions, it may be of interest to consider a method of changing this unhappy picture to one of brighter colors. I refer to the treatment by galvanic ionization of the pus-forming cavity, as advocated and used by Friel, of London, England, but, so far as I know, but little employed in the United States.

There is a beautiful simplicity in the technic which appeals. With a radiographic demonstration of the infected tract, which can easily be obtained, today, by cooperation with a competent radiographer, we are ready for our attack.

Zinc iodide solution, 2 percent, is the ionizing source which I first select. The effort is, of course, to sterilize the infected cavity by a literal bombardment of the diseased tissues with the bactericidal, astringent zinc ions, leaving the iodine ion free in the cavity after treatment to assist the work in a measure.

The solution is slowly injected into the pus-forming pocket, through a blunt-nosed syringe. As soon as we are fairly certain that the cavity is reasonably filled, as judged by the x-ray picture and the quantity of solution injected, we are ready for work.

Through the sinus in the chest wall, a blunt electrode is inserted just far enough to permit the tip to enter the cavity and contact the fluid with which it has been filled. When this has been accomplished, we have, to all intents and purposes, a water electrode, carrying the chemical elements of choice and flexible enough to give perfect contact with the cavity at all points. This electrode should be connected with the positive pole lead from a good direct-current machine.

The negative pole is the indifferent pole and should be hooked to a large pad placed on the opposite side of the chest and kept in contact by the patient's weight, the patient lying upon it while the current flows.

With this hook-up arranged, we turn on the current slowly, up to 5 milliamperes, and maintain it there for 10 or 15 minutes, unless the patient complains before such a time has expired.

In this way we literally electro-plate the pyogenic membrane of the intra-pleural pocket with zinc; and we repeat the process every 5 or 6 days. The result is a marked decrease of discharge; a marked thinning of its character which, from treatment to treatment, grows more and more of a serous nature; and an accom-

panying narrowing of the chest wall sinus until, in the end, it heals.

In connection with the suggestion of this method of attacking these obstinate type empyemas, I wish to report a case:

Mr. C.; a city fireman. First seen after a chronic empyema, following an influenzal pneumonia, had persisted for some eighteen months.

Thoracotomy and, later, a rib resection, had been performed without relief beyond that of the acute symptoms in the early stages of the condition, and there were two sinuses in the left chest, at the level of the 9th and 10th ribs, from which there was a copious drainage of pus. The discharge was so profuse that it required the changing of heavy dressings three or four times in each twenty-four hours. The man had lost strength and weight. He was acting as a clerk at the central fire station, but was unable to do anything else.

Aside from the chest condition, however, examination was largely negative. X-ray examination showed the location and size of the chest pocket. At the time he was referred for treatment he was being advised to consider a collapsing operation to induce healing, was very much discouraged, was running a mild afternoon and evening fever and weighed 168 pounds.

Treatment was begun by the method outlined above. Response was marked. Between the first and second treatments the discharge decreased at least fifty percent. In all, eight treatments were given and both chest sinuses closed. Treatment was begun in September and, in the latter part of November, the man was returned to full-time service in the fire department, and has so continued during the entire winter.

On March 10, 1930, he appeared normal, save for some diminution of the respiratory sounds around the area of the original pathologic zone. The sinus scars are firm and not painful. His weight is 206 pounds, his temperature is normal, and he is performing his duties without any discomfort beyond a slight "stitch" in the left side, which he occasionally feels after exposure to cold.

J. U. GIESY, M.D.,
Salt Lake City, Utah.

Treatment of Acne by Light

Phototherapy is one of the best treatments for acne. There are two methods: (a) By strong doses; (b) by weak doses. In the strong method the aim is to produce a pronounced erythema at the first treatment. A 10-minute exposure to the standard mercury vapor lamp, at 45 cm. distance, is sufficient. Five or six treatments, spaced at 10-day intervals, should be enough.

In the weak dose method, the first treatment is for 2 minutes, 3 minutes the second day, 4 minutes the third and so on until the patient develops a slight erythema. The dose should not be increased further, but

daily treatment should be continued for 4 to 6 weeks.—DR. M. L. MARCERON, in *Brit. J. Actin. & Physiotherap.*, May, 1930.

Physical Therapy in Atrophic Rhinitis

Sixteen cases of atrophic rhinitis were treated in the following way and in each case good results (though not a cure) were achieved:

1.—Cleanse the nostrils by removing all crusts;

2.—Apply mercurochrome, 1 percent, to each nostril and repeat in three minutes.

3.—Apply the quartz-mercury, high-frequency electrode, moving it slowly from place to place, covering the entire mucous membrane of the nose. Begin with 10 minutes in each nostril and increase it 1 or 2 minutes for each successive treatment, up to 15 or 20 minutes;

4.—Home treatment is limited to cleansing the nostrils with isotonic salt solution.—DR. C. B. SPUTH, Indianapolis, in *Arch. Phys. Therap., X-Ray, Rad.*, May, 1930.

Zeileis and the Doctors

THE following note is extracted from *Brit. J. Actinother. and Physiother.*, April, 1930.

At this time of day there is little need to remind readers of the identity of Zeileis, "the Wizard of Gallsbach," who has achieved world-wide fame (or notoriety, if that word is preferred) through his treatment of thousands of ailing persons with what are claimed to be almost miraculous results. The treatment is apparently administered on "mass production" lines, and appears to consist in the application of minute doses of x-rays, ultraviolet, radium and high-frequency, the two latter produced by a special apparatus.

Whatever the merits or demerits of the treatment, one result has been a strenuous quarrel between Zeileis and the medical profession of Austria. This quarrel continues to extend. In fact, according to the "Echo," Zeileis has now instructed a Viennese lawyer to proceed against his detractors. He says he is troubling no longer about the "machinations" of the profession, and that he has restored thousands to health. He denies that he has ever been treated himself by professor Gärtner, and the latter says that Zeileis' denial is grossly untrue.

Zeileis maintains that many physicians have now come to learn from him, from England, France, Holland and Germany, but strangely none from Austria. He says his son, who is a doctor, has had an enthusiastic reception in Boston, U. S. A., where he went to attend a physiologic congress. Our own information confirms this last point.

The inhabitants of Gallsbach are, of course, all on Zeileis' side. The Bürgermeister said that before Zeileis came they had only a couple of village inns; now they have ten hotels, nine pensions, and 76 private houses, with 789 beds. Last year over 95,000 persons passed a night there, and they expect an increase of 30 percent this year! Everybody there swears by him, and his picture is to be found in the business places there, as well as on the cigar trays, beer glasses, coffee jugs, and so on.

From all of which it is obvious that, whatever opinion the Austrian medical men may hold concerning Zeileis, the commercial interests of Gallsbach have no kind of doubt about his being a "benefactor of humanity."

Infrared Radiation in Upper Respiratory Infections

Probably one of the most important advances in the therapy of the second and third stages of acute rhinitis is the employment of radiant heat-light or infrared radiation. In the therapy of acute coryza, after the usual treatment providing increased ventilation and drainage, the application of radiant energy has acted as a valuable aid.—Editorial, *Arch. Phys. Therap., X-Ray, Rad.*, May, 1930.

X-Rays in Skin Infections

Furuncles, carbuncles, paronychia, cellulitis, phlegmon, erysipelas and other superficial pyogenic infections, are promptly benefited by the administration of one-half to one skin unit (MacKee) of x-rays. Other indicated local measures should not be neglected.—DR. WILHELM, in *Calif. and West. Med.*

Physical Therapy in Dentistry

Physical therapy in dentistry is valuable when used as an adjunct to medicinal and mechanical measures. Its abuses are not

due so much to the inefficiency of the apparatus, as to its inappropriate use. Correct applications and standardization of physical therapy technics in dentistry can best be accomplished by the appointment of a Council of Physical Therapy in the American Dental Association, made up of men of previous experience and unquestioned ethics.—DR. C. E. NORRIS, Indianapolis, in *Med. Herald*, Aug., 1929.

Ultraviolet Rays for Boils

For the patient who presents himself early in the disease, before pus formation, apply heat for 15 to 30 minutes first; then local ultraviolet irradiation at a distance of 15 inches. First irradiate the area widely for one-half to one minute; then irradiate the indurated area alone, through a hole cut in a piece of paper large enough to protect the surrounding area. In many instances the infection subsides after one or two such treatments, and, if it does not, the so-called ripening process occurs much earlier, because of the destructive, tissue-softening effect of the ultraviolet rays.

Small carbuncles may be treated in the same way.—DR. E. L. LIBBERT, in *Phys. Therap.*, Nov., 1929.

Physical Therapy in the Treatment of Fractures

The principal points in the physical therapy of fractures are as follows:

- 1.—Always have a roentgenogram taken and seen by the physician in charge of electrotherapeutic treatment.
- 2.—The application of proper splinting bandaging, etc.;
- 3.—Constant supervision;
- 4.—Early daily galvanic treatment;
- 5.—Movements and massage;
- 6.—Faradic or sinusoidal current in later stages.

DR. C. F. ORR WHITE, of London, Eng., in *Brit. J. Actinotherapy*, Nov., 1929.

Radium in Urethral Caruncle

For the treatment of urethral caruncle, a 25 mg. radium tube, in a 0.5 mm. silver capsule, is placed in a 1 mm. brass tube and covered with a rubber cot 0.5 mm. thick, supplemented, on the anterior face, with an extra millimeter of gum rubber.

The radium tube is placed in a package between two dummies that fit into the sulci on either side of the meatus and prevent the radium tube from being forced too high up. Another dummy tube, about 5 cm. in length, is attached to the upper three tubes with

gutta percha so that it projects into the upper part of the vagina and also helps to retain the package firmly in position. The radium is applied once only over the growth for 5 to 6 hours.—DR. R. E. LOUCKS, Detroit, in *Radiol. Rev.*, Sept., 1929.

RECENT ABSTRACTS

Radium Treatment of Polypoid Sinusitis

Polypoid sinusitis is a condition frequently encountered and resistant to treatment.

In *Arch. Physic. Therap.*, Jan., 1930, Dr. G. A. Robinson, of New York, reports that he has treated 40 cases by radium; 28 of these had previously received surgical attention by partial or complete ethmoidectomy and antrotomy.

The radium treatment consists in the application to the ethmoid area, one week after radical operation, of a 50 mg. radium capsule (or radon) screened with 0.2 mm. platinum and 1.0 mm. of brass. Only gamma radiations are employed. The time of application is from 3 to 4 hours giving 150 to 200 mg. hours per treatment. The applications are made at intervals of 10 days to 2 weeks for an average of four treatments.

Asthma, a complicating factor in 9 cases, was controlled in 7. The mucoid and mucopurulent secretions have been lessened. Headaches have been relieved and occasionally the sense of smell has returned. Small polypi have been made to disappear and the interval between recurrences has been lengthened.

Interaction of Ultraviolet and Infrared Rays

Summing up recent literature regarding the antagonism or otherwise between heat rays and ultraviolet rays, Dr. R. King Brown, in *Brit. J. Actinother. and Physiother.*, April, 1930, finds that we appear to have arrived at a stage in which we seem justified in concluding that, if heat rays are given to a patient before ultraviolet rays, the effect of the latter is enhanced; but if given after or simultaneously, the ultraviolet effect is reduced. However, the advisability of interfering with what may be called the normal effect of ultraviolet rays is still an unsettled question.

Precordial Pain and True Angina

True angina pectoris presupposes myocardial insufficiency. In *Am. Med.*, Nov., 1929, Dr. Wm. Martin, of Atlantic City, states that, for the purpose of differentiating between the true angina and neuritic precordial pains due to lesions of the phrenic nerve but often mistaken for angina, there is a definite means of testing, by means of the static wave current.

The patient sits upon an insulated platform, the chair preferably having a high back so that the patient can lean against the electrode placed upon the shoulder area to be treated. This electrode is cut from flexible metal and is about 4 by 5 inches in area. It is a special composition of lead and zinc, 22 gage, and can be molded to the part. The plate is moistened with ordinary water and is held in place by the pressure of the patient.

The electrode is connected with a static machine by a wire running to the positive side, while the negative side is grounded to a suitable fixture. The two pole pieces of the machine are pushed together before starting it. As the poles are gradually separated, a spark will jump across the gap and will be felt immediately by the patient if the phrenic nerve is at all sensitive or sore.

If neuritic pain is demonstrated, it can be treated by the wave current.

Therapeutic Fever Produced by Diathermy

There is a definite trend toward the opinion that fever is one of the major defensive measures of the body against invading organisms.

An editorial in *Arch. Phys. Therapy*, X-Ray, Rad., May, 1930, refers to recent work by King and Cocke, who point out the dangers resulting from the induction of malarial fever, which is the method of pyrotherapy usually employed in paresis. The experimental work of these authors shows that it is possible to produce any desired temperature by means of the electric current, thus avoiding many of the dangers and disadvantages which seem to be inherent in the elevation of temperature by malaria and foreign proteins.

Diathermy and Oxygen in Bronchopneumonia

In *Bull. Battle Creek Sanit.*, Jan., 1930, Drs. S. Pritchard and L. A. Tarbell report that, in 211 cases showing definite signs of pneumonia and in a large number of borderline cases, the combined use of diathermy of the lung area and oxygen administration was a decided therapeutic help when the treatment was initiated as soon as the disease was suspected.

The dosage of diathermy was increased up to tolerance, which varies with the size of the electrodes used. In adults, 4,000 milliamperes is the maximum, while in children it is 2,600 milliamperes. Tolerance is the greatest amount

of amperage which can be borne without discomfort.

The oxygen is administered through the head oxygen tent.

By these measures it is often possible to abort an impending bronchopneumonia.

Ten Points in Posture

Health as well as beauty is to be found in correct carriage, and many disorders of the human body are due, in whole or in part, to poor posture, according to Dr. Philip Lewin, a writer in *Hygeia*, who adds that, in many cases, poor posture is a result of habit. To remedy the defect, Dr. Lewin lists the following ten commandments:

- 1.—Stand tall.
- 2.—Sit tall.
- 3.—Walk tall and cheery, with weight transmitted to balls of feet.
- 4.—Draw in abdomen, pulling it backward and upward.
- 5.—Keep shoulders high and square.
- 6.—Pull chin straight backward toward collar button.
- 7.—Flatten hollow of back by rolling pelvis downward and backward.
- 8.—Separate shoulders from the hips as far as possible.
- 9.—Lie tall and flat.
- 10.—Think tall.—*The Medical Times*.

BOOKS

Hall: Ultraviolet Rays

ULTRA-VIOLET RAYS IN THE TREATMENT AND CURE OF DISEASES. By Percy Hall, M.R.C.S (Eng.), L.R.C.P. (Lond.), Hon. Actino-Therapist, The Mount Vernon Hospital, London and Northwood, etc. With Introductions by Sir Henry Gauvain, M.A., M.D., M.C. (Camb.), F.R.C.S., and Leonard E. Hill, M.B. (Lond.), F.R.S. Fourth Edition. St. Louis: The C. V. Mosby Company. 1930. Price \$4.50.

The popularity of this handbook is attested by the fact that it has now run into four English and three American editions.

The first half of the volume deals with the physics, physiology, pathology and hygiene of sunlight, as well as descriptions of the component rays and of apparatus which artificially produce ultraviolet rays. The second half is devoted to the application of actinotherapy in various disease conditions. In this type of work the author has had extensive experience, the results of which are given here.

One of the matters brought out is the effect of ultraviolet rays on deep-seated lesions, such effect being due to the property possessed by this type of radiation of enhancing the bactericidal power of the blood.

The author, throughout the book, stresses the fact that actinotherapy should only be administered by or under the immediate supervision of a duly qualified medical man. He decries the extension of the use of powerful lamps by laymen and persons with insufficient medical knowledge or who lack acquaintance with the agent they are using.

NEWS NOTES

Physical Therapy Association

The American Physical Therapy Association will hold its fortieth annual meeting at the Hotel Sherman, Chicago, October 8 to 10, inclusive, 1930, following two days of preliminary instruction.

For full information, address the Secretary, Dr. C. C. Vinton, 1650 Broadway, New York City.

Physical Therapy in New York

This year's meeting of the Medical Society of the State of New York was the occasion for the inauguration of a section on physical therapy. An instructive program was presented and the interest was so great that the meeting room was not large enough to accommodate the attendance.

F. T. W.

New Discovery of Radium

In *La Siècle Médical*, Paris, June 15, 1930, it is stated that a new supply of radium has been discovered at Grosny, Russia. The journal states that this supply is so vast that it will revolutionize the present commercial aspects of radium.

Westinghouse X-Ray Company

The Wappler Electric Company and the American X-Ray Corporation will soon be united and, with other facilities, will be known as the Westinghouse X-Ray Company, Inc., back of which will be the resources of the Westinghouse research laboratories and engineering organization. This new company should give the medical profession some good things in the line of physical therapy apparatus.

THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)
GEORGE B. LAKE, M.D. (Medicine)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.]

Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 7 (MEDICAL)

Submitted by Dr. J. S. Lankford, San Antonio, Tex.

(See CLIN. MED. AND SURG., July, 1930, p. 531)

Recapitulation: A man of 55 years, with a negative family history, living a very strenuous life, and with nothing significant in his personal history except the fact that at 7 years, nearly all his hair fell out, developed severe and constant headaches, involving the frontal and temporal regions and the left side of the head and neck. He also complained of enormous polydipsia (40 to 50 glasses of water a day), accompanied by heavy and constant sweating. He was extremely nervous and had lost 45 pounds in weight in six months.

General Examination: The patient appeared anxious; muscles flabby; skin pale, very smooth, dripping wet and showing dermographia; temperature, 97°F.; respirations, 17; tongue bare in spots; roentgenograms of the skull show no abnormalities in the brain or sella turcica.

Cardiovascular System: Marked cardiovascular sclerosis; rough, blowing, systolic murmur at apex, with systolic vascular murmurs in both sides of the neck; slight

aortic regurgitant murmur; blood pressure, 170/70; pulse, 90.

Kidneys: Urine, spec. grav. 1.020 to 1.030; trace of indican persistent; trace of sugar in one of several specimens; phthalein efficiency, 75 percent; microscopically negative.

Blood: Hemoglobin, 60 percent; red cells, 4,760,000; leukocytes, 4,200, with 57 percent lymphocytes; Wassermann reaction, negative.

Nervous System: Arm, epigastric and umbilical reflexes, decidedly diminished; cremasteric and knee reflexes, absent; heat and pain sensations in feet and ankles, diminished; soles of feet insensitive.

Requirement: Suggest diagnosis and treatment.

DISCUSSION BY DR. EMIL C. JUNGER,
SOLDIER, IA.

This patient has used up about all his mileage. The Good Book says man is good for three score years and ten (providing he uses common sense in living according to laws of health), but this traveling man has gone "on high" too long, has used all kinds of poor gas and oil in his machine and has deposited too much carbon throughout his system. His water circulation is clogged up, in certain sections of his anatomy, and his pump is beginning to leak. Energy is leaking past the rings and his mileage yet to be covered will have to be run "on low" and only a little every day.

DISCUSSION BY DR. C. F. BARBER,
FELICITY, OHIO

Considering this case as a whole, the most likely diagnosis seems to be syphilis of the central nervous system, involving particularly the basal region of the brain. The

fact that the patient's hair nearly all fell out at about the age of seven is suggestive of a congenital infection. The infection, if luetic, was probably acquired later in life. A negative blood Wassermann test does not rule out syphilis, especially in view of the clinical findings. The spinal fluid should be carefully examined, microscopically and chemically. The negative patellar reflexes, etc., point to some involvement of the spinal cord.

The patient apparently has diabetes insipidus, which could result from syphilitic inflammatory changes in the basal region of the brain, such as gumma, meningitis, etc. The severe headache can be explained on the same basis. Other evidence pointing to syphilis includes the apparent aortic insufficiency and the relative lymphocytosis.

There should be a careful examination of the eye grounds, pupils and pupillary reflexes, as well as of the other cranial nerves.

If a diagnosis of tertiary syphilis is made, the treatment would be symptomatic and specific. The latter would include the iodides, mercury, bismuth and neoarsphenamine or its equivalent. Bismarsen might also be considered.

DISCUSSION BY DR. A. SASKA,
HOMESTEAD, PA.

Essentially four conditions should be considered: (1) Neurasthenia; (2) aortitis with, perhaps, diffuse aneurism; (3) diabetes mellitus, and; (4) cerebrospinal syphilis.

Neurasthenia (nervous exhaustion) can be ruled out at once, because of definite heart disease, apparent trophic changes and glycosuria.

To rule out any changes in the aorta, x-ray studies of the heart and aorta should be made.

As to diabetes mellitus, it can be said that the loss of weight, the rather severe pyorrhea, the troubled digestion, the heart lesions, the thirst and the trophic changes, all fit into the picture; but the fact that only a trace of sugar was found in half a dozen specimens of urine speaks rather strongly against diabetes mellitus. One would expect, in a fairly severe case of diabetes, a rather constant and abundant amount of sugar in the urine. The blood sugar content should be investigated. If this be diabetes, was this patient on a carbohydrate-free diet; or was he under

insulin therapy shortly before passing these specimens?

My suspicion is strongly in favor of *cerebrospinal syphilis*. I certainly would not rule out this condition by one negative Wassermann test, but only after the spinal fluid was found negative for the Wassermann test, the Kahn reaction, the colloidal gold test, increase in globulin and for increase of lymphocytes. My diagnosis, in spite of insufficient laboratory studies, is *cerebrospinal syphilis* until I am proven wrong by completely negative findings in the spinal fluid.

I base my diagnosis on the organic heart disease, and particularly on aortic insufficiency; on his constant headache, caused by intracranial pressure, the result of gummas or increase in volume of the cerebrospinal fluid; and on the apparent trophic changes, as evidenced by diminished reflexes and diminished sensation to heat and pain. The hyperidrosis and dyspepsia are interdependent and are the result of a disturbed sympathetic nervous system. Additional neurologic studies should be made. How are the Romberg sign, the gait, the pupillary reflexes?

Treatment: Keep the patient in bed; his harassed heart needs it. Withdraw about 25 cc. of spinal fluid once a week and, as his condition improves, every two or three weeks. Sodium iodide, 10 grains (0.65 Gm.), should be given three times a day and increased daily by one grain as long as it is tolerated; also bichloride of mercury, 1/30 grain (2 mgm), in compound tincture of gentian, three times a day, before meals, to improve the appetite and for its antiluetic effect. Small doses of neoarsphenamine (0.4 Gm.) could be given weekly, with due precaution as to possible damage to the kidneys and optic nerves. Finally, a good and nourishing diet should supplement our treatment.

SOLUTION BY DR. J. S. LANKFORD
CORPUS CHRISTI, TEX.

Original Diagnosis: Syphilitic cardiovascular sclerosis, with interstitial changes in the posterior portion of the pituitary, causing disturbance of the water balance of the body; pituitary headache.

This problem may not be very hard to solve, but it has some interesting features. The essential part of it is to account for the enormous water drinking and heavy

sweating. The diagnosis gives us a basis for investigation.

There is no history of chancre, nor is there any scar on the penis; but well marked cardiovascular sclerosis, at this patient's age, is always suggestive, and the clinical picture is sufficiently clear—the early shedding of the hair; the bare spots on the tongue; the extreme nervousness; the lost reflexes; the diminished heat and pain sensation of the feet and ankles; the insensitive soles. There is the further fact that this peculiar pituitary disease, with the brow, temple and indurative headache, is very commonly syphilitic. More than all, the condition of the heart itself strongly indicates this basic etiology, particularly the diastolic murmur and high pulse pressure. Fully ninety percent of all aortic cases are syphilitic.

The Wasserman reaction was negative; the laboratory was reliable; but the assumption of syphilis was justified by the results of treatment. In the face of such clinical symptoms, we, in this office, have long since learned to disregard a negative Wassermann reaction.

X-ray study of the skull was made and the sella turcica was found normal—roomy enough, with no clamping nor erosion of the clinoid processes. Hence we took the position that the trouble with the pituitary, which was so clearly demonstrated, was interstitial. A number of cases have been seen, especially in eye diseases referred for diagnostic study and internal treatment, where the sella turcica was normal and pituitary disease was proven by the results of treatment.

All of us have seen cases of diabetes insipidus and have relieved them with pituitrin; but few may have seen a case where the enormous quantity of water consumed all passed through the skin, or nearly so, the urine being of high specific gravity.

It was proven clearly in this case that the part of the pituitary involved was that part of the posterior portion that produces the newly-discovered secretion demonstrated by Kamm in his prize essay, presented before the American Association for the Advancement of Science, December, 1929. This article was published while we had the case under diagnostic study. Kamm has abundantly proven that this newly-found secretion regulates the water balance of the body. In this particular case that part of the gland was failing in its function and water retention was nearly impos-

sible—the man was simply “melting and running off through the skin;” not by the kidneys. We are in doubt, still, why this was so, and would like to have this point discussed.

The sweating was embarrassing to the patient. When visiting the offices of important business men, after a five-minute interview, he would leave his chair wet. Possibly the explanation may be found in the vasomotor system, influenced by syphilis; or it may have been due to the intimate relationship of the kidneys and skin, both powerfully affected by the pituitary. We know that the skin and kidneys often exchange functions.

We had the patient under study for three or four days and then we were compelled to treat him by correspondence, telegraph and telephone, following him all over the country. He was required to make frequent reports, telling about the water drinking and sweating and all the other symptoms that he could describe, and was instructed to go to a competent laboratory man and furnish us blood and urine reports. He was also required to have blood pressure taken and to report anything else of interest.

Treatment: His mouth was given proper attention. He was given a one-grain, whole gland pituitary tablet three times a day, before meals. This tablet, of course, contained Kamm's secretion. Rather moderate doses of mercury and iodides were given after meals and a mercurial pill at bed time. He was advised concerning diet, habits of life, freedom from business strain and other things necessary.

In three weeks, the water drinking had dropped to fifteen or twenty glasses a day, with the perspiration reduced accordingly. In six weeks the restoration was complete, symptomatically; he was drinking five or six glasses of water a day, the skin action was restored to the normal and he was feeling fine.

Finally, there are three points in the case that we would like to emphasize: First, by all means to disregard a negative Wassermann reaction, where the clinical symptoms of syphilis are plainly evident; and this applies to treatment of all diseases, especially those of a chronic nature.

Second, if there are convincing symptoms of pituitary disease, it must be remembered that it may be interstitial, even with swelling and pressure from that cause, and the

sella turcica may be perfectly normal in appearance and therefore deceiving.

The third point is important and we confess an error. Several months after the patient was dismissed, he developed a sequel that was vital—typical *exophthalmic goiter*, with bulging eyes and all the other eye signs; pulse 140 to 150; nervous system gone wild. He was in Pittsburgh at this time and, after some correspondence, operation was deemed necessary and he was sent to Crile, who operated successfully.

We must, therefore, always consider the interaction of the endocrines, the close association, the dependence of one upon another and the likelihood of complications and sequelae. We had before us some evidence of coming thyroid trouble: The great nervousness; the pulse a little above the normal; the dermatographia; and the action of the skin, but all these symptoms seemed to be explainable in other ways and there were indications against hyperthyroidism, especially in the temperature, which was persistently subnormal, ranging at about 97°F., or lower. The taking of a basal metabolism test would have been wise.

CLOSING COMMENTS

BY DR. GEORGE B. LAKE,
CHICAGO, ILL.

This interesting case has been so well discussed that little remains to be said, but one or two points may, perhaps, be profitably emphasized.

The first is the serious error of diagnosing syphilis solely upon the basis of a positive Wassermann reaction, and the equally grave mistake of ruling out that disease upon a negative reaction. Our professional forefathers diagnosed syphilis very regularly (if not always very early), upon the basis of clinical signs and history alone—and so can we! The Wassermann test is an invaluable help in making such a diagnosis, but it is far from telling the whole story.

The second point is double-barreled. It is the custom, with too many physicians, when a patient is found to be suffering with syphilis, to assume that all his signs and symptoms are the direct result of this protean disease and to confine their therapeutic efforts to the administration of arsenamines, with, possibly, some mercury or bismuth. The fallacy of such a line of reasoning is well shown by this case. The rather obvious pituitary disorder (which

may have been of syphilitic origin, or not), required direct treatment, in addition to the antiluetic medication.

The second barrel is the fact that, having diagnosed syphilis, many physicians cease to look for any other morbid process. The fact is that a syphilitic patient may be, and frequently is, suffering from some other more or less unrelated disease and, until we have recognized all the things which may be the matter with him, we have not done him full justice. There seems, from the first, to have been some evidence of thyroid instability, which a basal metabolism test might have revealed. It would be interesting to know whether or not the active treatment with iodine had any part in stimulating the thyroid to its burst of over-activity.

PROBLEM NO. 9 (MEDICAL)

Submitted by Dr. A. S. Thompson,
Havelock, Ont., Canada

The patient is a man, age 70 years; strong, healthy and very active.

Family history excellent.

Personal history: He has been in excellent health for the past 60 years, has a good physique and weighs 165 pounds.

In March, 1928, he had an attack of influenza, but kept at work with a temperature of 102.5°F. He recovered, but a gradual loss of weight and strength began, with great physical weakness and rapid pulse on exertion. His appetite and digestion were good. In December, 1928, his weight was reduced to 140 pounds.

Had three attacks of "influenza" in the winter of 1928-29. In May, 1929, he had a thorough examination at a good clinic, the findings being negative. All organs were reported healthy; blood pressure, 126/80; heart, kidneys, lungs, digestion and nervous system, normal. His blood count, in June, showed 56 percent hemoglobin; red blood-cells, 4,450,000, leukocytes, 6,200, normal appearance. Some hard edema of the ankles was present, but disappeared after a night's rest; pulse 90.

Treatment: Liver and liver extract were given, with large doses of plain Bland's mass—up to 90 grains (6 Gm.) daily

At the end of June, 1929, the patient's weight, was 121 pounds. He took a month's rest at the seaside, where he gained 4 pounds in weight, which was lost in less

(Continued on page 706)

THE CLINIC

SYPHILIS

Colloidal Mercury Sulphide-Hille in Wassermann Fastness

By WINFIELD SCOTT PUGH, B.S., M.D., *New York City*

Chief of Clinic and Assistant Genitourinary Surgeon, City Hospital

THAT THE last decade has marked a great advance in the treatment of syphilis, there can be little doubt. I must confess that, for the past thirty years, we have been somewhat pessimistic regarding the future of syphilis, though it has never been admitted before.

If one is able to follow up cases for a long period of time, as we have been able to do, I think most physicians will be shocked. The organization with which I have been associated always keeps efficient records and the follow-up work is easy; not so in civil life. This is, perhaps, the reason why many of us boast of cures that are, more than likely, failures.

Now that the last decade has developed such great aids in diagnosis and treatment of syphilis, perhaps it will be different. Who knows?

Since the advent of the blood tests, we have been particularly intrigued by that group of cases known as Wassermann-fast. Many of these, in the pre-Wassermann era, were regarded as cured and attention only revived on the appearance of locomotor ataxia, parietic dementia or, only too frequently, hemiplegia.

We have certainly been seeing our share of these cases and, in spite of the glowing reports given by colleagues, have been not a little distressed by our poor results. It is true that some of our cases have cleared up

after the use of intraspinal treatments, silver arsphenamine, etc., but an annoyingly large number of defeats seem to haunt us.

All conscientious physicians are rightly concerned over these unfortunates and, like a drowning man clinging to the proverbial straw, we have tried everything. I am always a bit skeptical and admit no little surprise at the results attained in the present small group of cases. While it is still a little early to arrive at positive conclusions, the present achievement suggests that the sun may still be shining, even if behind the clouds.

This small series of Wassermann-fast cases of syphilis is presented, in the hope that it will stimulate further research in this important field.

Case 1: Mr. R. A. B., white; age 43; merchant; single; native of the United States.

This man was referred to me in April, 1928, by an out-of-town physician, with the following history: About five years ago (in February, 1925) a penile chancre appeared. A Wassermann test was made at that time and was reported four plus. Secondary symptoms did not appear, as the patient was placed on rather intensive treatment as soon as the report of a positive blood test was received.

For two years he received arsphenamine and mercury salicylate, in the usual series

of treatment. At the end of this time his Wassermann reaction was still four plus. Mr. B. felt well and went to another city, where he received no treatment for a year. He then developed a sore throat and the Wassermann reaction was again four plus. He was given another year with arsphenamine and bismuth, all throat symptoms entirely clearing up; the Wassermann reaction was, however, still four plus.

When Mr. B. came to me there was a decided suggestion of an impending saddle nose, and a marked lesion of the nasal septum was present. This man received intravenous and intraspinal treatments with silver-arsphenamine, 0.3 Gm. twice weekly, and all symptoms cleared up, but not the blood Wassermann reactions. The spinal fluid was normal. It was very difficult to keep this patient under treatment, as he was much discouraged about his blood tests. I was also annoyed because, in spite of his negative spinal fluid Wassermann reaction, he was forgetful and slightly careless about his attire, while formerly he was sartorially perfect.

On April 14, 1930, I gave him 3 cc. of Colloidal Mercury Sulphide-Hille, intravenously, and similar doses on April 17, and 21. Aside from slight nausea, there were no reactionary signs. As his Wassermann test was due at this time it was taken (April 23) and, as usual, the report was four plus.

Injections were continued, twice a week, until May 15, a total of twelve treatments being given. A Wassermann test, taken May 15, was negative, and another, taken May 20, was also negative.

Case 2: A. B.; white; age 42; stevedore; native of Lithuania.

Two years ago this patient had the usual penile chancre, which was followed, in a little over three weeks, by the usual polymorphous eruption, with sores in the throat and about the anus. He has been treated by very competent physicians, who see many cases of syphilis. He has been fairly regular in attendance and has received one injection of arsphenamine and two intramuscular injections of mercury salicylate each week, until eight doses of arsphenamine were given. This was followed by a month's rest, after which a Wassermann test was made (result, four plus) and treatment was started again.

After the first year, Wassermann reports began, at times, to drop as low as two plus,

but always came back to four. The last test, about April 1, was also strongly positive (four plus).

On April 2, he was given 5 cc. of Colloidal Mercury Sulphide-Hille, and this was repeated twice a week until 10 doses had been administered. At the end of that time, the Wassermann reaction was negative.

Case 3: N. K.; female; white; age 21; married.

This case gives one a fair idea of the slight knowledge which some persons have of the seriousness of syphilis. The young woman was married at the age of sixteen, and four months after marriage she aborted. To make our narrative brief, there is a history of at least five premature expulsions of the fetus, early in pregnancy, during these years.

She has been examined by a number of physicians who failed to make the real diagnosis, as there was no history of an initial sore nor any of the so-called secondaries.

I first saw this patient in September, 1929, and tried to elicit a history of syphilis. Her husband was then called in and, when the question was put, admitted that he had syphilis, and said that his wife had been told of the infection before marriage, but did not seem to mind. A blood Wassermann test of the lady was reported four plus.

Mrs. K. was eager to be rid of her disease and was placed under intensive treatment with arsphenamine and bismuth. From the time I saw her until early in April, 1930, frequent Wassermann tests remained four plus.

Beginning April 15, 1930, she has been receiving 3 cc. of Colloidal Mercury Sulphide-Hille, intraveonously, twice a week for three weeks—that is, six injections. On May 5, a Wassermann test was made and found negative.

Case 4: L. O.; white; age 38; native of Norway; fisherman.

The patient reported in August, 1929, with a large sloughing area of the scalp in the left frontal region. Beneath this area there was a marked osteitis. In addition, the patient's other chief complaint was difficulty at stool. Examination here revealed a syphilitic stricture of the rectum.

It appears that, about four years ago, the patient had been exposed and, a few weeks later, sore throat developed and a

copper-colored eruption appeared over the body. There was no penile chancre, and I suspect that the initial lesion was somewhere in the fauces.

This man has been treated in a very irregular manner and, we might say, all over the world. I always feel particularly sorry for the man with a venereal disease who has to see a different doctor every few days or weeks.

It was at once evident that tertiary syphilis was the condition to be considered. He was treated in one of our large city hospitals from the date of reporting to about April 1, 1930. Very active treatment was invoked, consisting of arsphenamine, silver-arsphenamine, mercurial ointment and bismuth. All of these treatments were faithfully carried out, without changing the Wassermann reaction from a four plus.

On April 1, we took over the service and continued as our predecessors, with no better success.

On April 15, after receiving some Colloidal Mercury Sulphide-Hille, it was decided to try it on this apparently hopeless Wassermann-fast case. Following the first injection of 5 cc., intravenously, there was a very severe chill, with nausea and malaise—a condition which I note in other reports.

On April 22, he was tested again with 5 cc. of the mercury sulphide, and no reaction took place. On April 28, the Wassermann reaction was reported as two plus. Treatment was continued, twice a week, until June 1, when the Wassermann reaction was found negative.

Case 5: I. J.; male; white; age 51; physician.

There were some rather interesting features in this case, one of which is the causative factor. This gentleman was making a rectal examination, in what was thought to be a probable case of carcinoma. The doctor was very careful to use a finger cot, but the latter did not cover the web between the fingers, and here a chancre appeared.

The original infection took place about five years ago and, as he is a conscientious individual, he has not engaged in practice during this period, but has been under the care of a number of our most experienced physicians over a long period and has taken

his medication faithfully, but the Wassermann reaction remains positive.

While discussing the case with him and his surgeon, I mentioned the subject of Colloidal Mercury Sulphide and both suggested that we try it in this case. Accordingly, on May 1, 1930, he received his initial intravenous dose of 5 cc. and, as there were no particularly distressing reactions, this was continued, twice a week, until July 1. A Wassermann test, taken May 20, was four plus; on June 20, it was two plus.

Case 6: W. V.; white; male; age 33; bank clerk.

This gentleman came to me about May 1, quite by accident. While talking with him one day, knowing that I was a physician, he began to tell me of his annoying headaches, which had been recurring at intervals over a period of about five years. As his hands came into view I noticed that the palms were a little scaly. When asked about his hands, he told me that the condition had been diagnosed as eczema, ringworm and heaven only knows what else. Electric light and x-rays had been used, but the scales always remained.

The next day Mr. V. came in to see me and then admitted that he had been under treatment for syphilis, off and on, for about five years. In spite of regular treatment, he told me that the blood has shown a four plus Wassermann reaction, continuously. A blood test, taken at this visit to my office was also four plus.

He was at once given 3 cc. of Colloidal Mercury Sulphide-Hille, intravenously, and similar doses were given twice a week until June 1, 8 injections having been given, and the Wassermann reaction was still four plus. The same treatment, twice a week, was continued until June 28, when his Wassermann reaction was found negative—and we hope it remains so.

CONCLUSIONS

I feel that a small group of cases, such as that here presented, is not conclusive, but it suggests continued effort in this line.

It is of particular interest to note that these cases of late or tertiary syphilis had resisted all previous efforts, to render them Wassermann-negative.

30 East 40th Street

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

Training Medical Department Officers

THERE is a big difference between a good doctor and a good medical officer. The former has one great duty and purpose in life, the restoration of sick people to health; the latter adds to this the responsibility of assisting very materially in the successful prosecution of a military campaign and has two professions—he must be both a physician and a soldier.

Most of those who saw service during the War realize this fact more or less keenly, and those who have a full appreciation of its implications have retained their commissions in the Medical Reserve Corps and are working at their secondary profession more or less actively. A number of young men have infused new blood and life into the Corps during the last ten years.

Those who take their military duties seriously have been availing themselves of the opportunities offered by the various Medical Department training camps, which are conducted each summer, in various parts of the country, and of which that at Fort Snelling, Minnesota (between Minneapolis and St. Paul) is by far the largest.

At this camp were gathered, in the early weeks of July, nearly 400 officers of the various Corps of the Medical Department—Medical, Dental, Veterinary and Med-

ical Administrative—from eight states of the Middle-West. This training of all of the Corps together has the distinct advantage of accustoming the men who will have

to function in units, in time of emergency, to working together in time of peace and thus gaining an understanding of each other's problems.

The actual training was largely worked out and entirely conducted by the Reserve Officers themselves, under the guidance of a group of Regular Army officers consisting of Col. Geo. A. Skinner, M.C. (Senior Instructor), Maj. Henry C. Bierbower, M.C. (plans and training officer), Majors W. F. Hoffmann, C. H. Lovewell and M. A. St. Peter, M.C., Capt. J. A. McCallam, V.C., and Capt. J. F. Hamner, M.A.C. I was detailed (because of long service in the Regular Army) as assistant to the plans and training officer.

The day began at 6:00 A.M., with setting-up exercises. The mornings were filled with conferences on basic military subjects,

outlined by the Army authorities, but worked out and presented by the Reserve Officers of the various units—there were seven medical regiments, five general hospitals, three evacuation hospitals and one veterinary general hospital in camp—with a period of close-order, cadenced infantry



1.—Col. George A. Skinner, M.C., U. S. A., Senior Instructor of the Camp.

drill, conducted by Lt. Col. Bernard Lenz, Inf., and Maj. H. E. Strider, S.C. Res.

The afternoons were filled with lectures, discussions and problems, appropriate to the requirements of the various types of organizations, planned and executed by the members of the several units. There was plenty of work to keep everyone busy from 6:00 A.M. until 3:30 P.M., when the formal

dinners in various hotels in the Twin Cities, all of which were very enjoyable.

In addition to these more or less formal pastimes, there were always the wooded hills along the Mississippi and Minnesota



2.—Historic Round Tower, Ft. Snelling.

classes ceased, but the organization commanders and their helpers often worked far into the night, preparing plans for their units.

Duties were not, however, too onerous. In the late afternoons the Ft. Snelling golf course was open to the devotees of the ancient Scottish game, and a camp tournament was played on the Superior course



3.—Camp Golf Champion Receiving Trophy, and the Foursome in which he played. (Left to Right: 2d Lieut. R. H. Brant, Sn. Res.; 1st Lieut. Floyd A. Sandberg, Dent. Res. (winner); Col. Geo. B. Lake, Med. Res.; Lt. Col. F. L. Litty, Dent. Res.)

in Minneapolis and won by 1st Lieut. Floyd A. Sandberg, Dent. Res., a member of the 313th Medical Regiment, who received a very handsome cup as a trophy.

The members of the Reserve Officers' Association had a dinner at the camp mess, and a number of the organizations had unit



4.—Company Aid Station with "Jaw-bone" Casualties.

rivers, for the delight of hiking nature lovers.

One morning was spent in observing an impressive demonstration of the work of a medical regiment, staged by the young men of the Medical R.O.T.C., who were also in camp in the same locality.

By no means the least important feature of such a camp is the intimate association, in that fraternal spirit bred, in its perfection, only in the Army, with coworkers from many localities. In this way one's mental horizon is extended and one becomes a better human being.

It seems odd that any able-bodied medical man, who has open to him an opportunity to participate in such inspiring and worthy activities, would fail to take advantage of such a chance. One of the chief reasons for this neglect of one's duties as a citizen seems to be reluctance to accept commissions in the lower grades. One must, however, remember that, except in the case of a few nationally famous men, the grades in which physicians and dentists are commissioned depend, not upon professional accomplishment, but upon military service and attainment. Every physician who can pass the physical examination should accept the commission offered him, and then earn the higher grades by sincere service to his Country in the Medical Reserve Corps.

GEO. B. LAKE, COLONEL MED.-RES.
Chicago.

Lubrication with Metaphen in Oil in Filiform Strictures

THE use of a good lubricant is highly essential in the successful treatment of filiform strictures.

Upon examination of the urethra, we find the area greatly inflamed and the lumen so constricted as to make a painless entrance with an instrument almost an impossibility; but with proper lubrication it is found that mechanical manipulation can be made comparatively easily and without any unnecessary pain.

The various vegetable lubricants, such as olive oil, K-Y jelly, etc., have been used. The procedure was to inject 10 cc. of oil into the meatus and massage the urethra until the oil had trickled past the filiform stricture. Upon inserting the filiform bougie into the canal, we were generally confronted with such complications as *urethral chills* and soreness at the time of manipulation and afterwards.

In Metaphen-in-oil we are presented with three distinct advantages over the ordinary oil: First, it is a good lubricant; second, it is a powerful antiseptic; and third, because of the menthol content, it is a mild topical anesthetic. Injection, in the meatus, of 10 cc., and subsequent massage, will give the desired lubrication, without the undesired aforementioned complications.

FREDERICK J. CICOTTE, M.D.
Chicago, Ill.

A Secretary of Public Health

WHEREAS, the health of its citizens is our Nation's greatest asset; and

WHEREAS there is now much duplication of effort and division of responsibility in regard to health matters, as now conducted; and

WHEREAS Labor, Commerce, Agriculture and other matters of relatively less importance are represented by an officer in the President's Cabinet, while the Nation's health is not so represented, although such representation has been recommended by the American Medical Association and endorsed in their platforms, from time to time, by both of the major political parties; and

WHEREAS it seems reasonably certain that the various health activities now in

operation could be more efficiently conducted if coordinated under a responsible head; therefore be it

Resolved That the American Medical Editors' and Authors' Association, in convention assembled (at Detroit, Mich., on June 24, 1930) recommends and urges that steps be taken immediately for the creation of a Portfolio of Public Health, in the Cabinet, and that a copy of this resolution be forwarded to the Secretary of State, Washington, D. C., to the secretaries of all National and State Medical Organizations and to all members of this Association.

Signed, for the Association:

H. LYONS HUNT, Pres.

E. VANDERVOORT, Secty.

[This resolution was passed at the convention of the American Medical Editors' & Authors' Association and all editors present stated they would give it publicity in their journals.—Ed.]

Scarlet Fever

SCARLET fever is especially a disease of temperate climates, where it is practically always present in the large cities. In the United States it affects particularly the Northern States, being more prevalent there than in the South.

With the opening of the schools, the autumn months are always signalized by a marked increase in the number of cases of scarlet fever reported to health officers, each month showing a progressive increase until the maximum is reached in December or January. In July and August there is a great decrease in the number of cases reported, the number being very much less than in the winter months.

While scarlet fever may attack persons of any age, not even the very old being exempt, it is primarily a disease of infancy and childhood. The susceptibility to the disease decreases rapidly with increasing years. The greatest susceptibility to scarlet fever falls between the second and the ninth year of age, over 66 percent of the deaths from this cause taking place in this age period.

It is desirable that the symptoms of scarlet fever should be generally known so that all persons may be on their guard against the disease. Its principal symptoms consist of sore throat, fever, rapid pulse, the breaking out of a bright-red rash (from

which it takes its name) over the body and extremities, and usually swelling and tenderness of the glands of the neck. These symptoms are followed by a period of desquamation, during which the outer layers of the skin are shed in scales, flakes, or patches.

The disease strikes suddenly. A child, apparently in the best of health previously, is seized with sore throat and fever, very often with vomiting, and, in infants, convulsions. The fever mounts rapidly, the skin feels unusually hot and dry to the touch, the tongue is furred, the throat is parched, and the face is flushed and somewhat bloated. Cough and running of the nose are usual. This stage usually lasts from 24 to 36 hours.

The rash generally appears on the second day, but may be deferred for 48 hours. On the other hand, it may begin to come out a few hours after the first symptoms. It appears first on the neck and chest as a breaking out of fine, scattered, bright points, implanted on a scarlet flush. It spreads rapidly, so that by the evening of the second day the entire body may be covered. The eruption, at its height, has a vivid scarlet hue and is more marked on the inner surfaces of the arms and legs and where joints make folds of the skin, as in the groins and at the elbows. After persisting at its severest for two or three days, the rash gradually fades, the fading being accompanied by a progressive fall of the fever. With the fading of the eruption and the fall of the fever, the skin looks stained and feels rough. Gradually its outer layers begin to be thrown off, the process usually beginning about the neck and chest.

Inflammation of the throat is a prominent symptom in scarlet fever. This is present in various grades and may vary from redness of the hard palate and inner surface of the cheeks, with some swelling and more vivid redness of the soft palate and tonsils, to the condition known as "diphtheroid," with much increased swelling and inflammation of the tonsils and neighboring parts.

Scarlet fever shows marked variations in its severity. There are mild, or abortive cases, in which the rash is scarcely visible, or in which the sore throat and the "raspberry tongue" may be the only signs of the disease. In certain epidemics, particularly in schools, this type of the disease may predominate. On the other hand, the symptoms may be so severe that the patient,

overwhelmed by the poison of the disease, may die within 24 to 36 hours, with high fever, great restlessness, delirium, and convulsions.

Scarlet fever is distinguished by the variety and severity of its complications, which may develop in cases apparently mild at the outset. The most common of these are nephritis, middle ear disease, endocarditis, adenitis and joint affections. Of these, nephritis and ear complications are by far the most common.

While the average period of incubation of scarlet fever has been stated to be from 2 to 4 days, probably with a maximum of 7 days, a few examples of what seem to be longer periods have been recorded.

U. S. PUBLIC HEALTH SERVICE,
Washington, D. C.

Mosquito Repellant

A new method of applying old drugs for repelling mosquitoes is embodied in the following prescription:

R.

Oil of citronella.....	3 iv	(16.00)
Spts. camphor.....	5 ii	(8.00)
Cedarwood oil.....	5 ii	(8.00)
White petrolatum.....	3 ii	(64.00)

Melt the petrolatum on a water-bath and, when it is just above the melting point, add the other ingredients and stir thoroughly. If it is too hot, the oils will evaporate; if too cold, it will not mix well.

Pour the liquid mixture into large-mouthed bottles or jars, cap or cork and cool at once.

This cream may be rubbed on the hands, face or hair and, because of the greasy base, one application should be effective for several hours.

W. A. EVANS, M. D.

Chicago, Ill.

The Activities of the School Child

AMONG the commonest causes of illness and diminished efficiency, today, are colds, with their often serious complications in the nose, throat and chest; poor teeth and the decay which so readily attacks them; and the steadily increasing incidence of "nervous" diseases.

School children seem to be the most frequent sufferers from these maladies; and next those persons who work in crowded, ill-ventilated rooms. These con-

siderations suggest that the conditions are, in a sense, deficiency diseases, due to a lack of balanced activity and other hygienic factors.

I believe that if children were obliged to go to school only one or two hours daily, according to their ages and preferably during the morning, for five days a week, they could be taught as much and assimilate more than they do at present. Reciting two lessons on alternate subjects they would learn as much or more than now, when they are compelled to sit cramped in a tight-fitting desk six or eight hours a day in a close, humid, "sleepy" room and cram and cram. After their short recitation periods, teachers would have time to do a little work with the slow ones.

The children could and should have as much of the day as possible in the open air, weather permitting. During inclement weather "gym" classes could take the place.

Let the children study, in group fashion, things which they show an inclination, liking or talent for. In this way they will grow to love and have some desire to do the work of the necessary trades and professions of adult life.

Let them have time for "nature" studies, in the field, which will satisfy their curiosity and lead them to think, even before reaching high school, because many never reach that institution nor those higher.

Let them have time during the day to think, dream or work out their notions, and do not prohibit solitude to those who wish to be alone. From the thinkers and dreamers come the directors, artists and inventors, of which we could use more.

By doing the things necessary, the things they want to do and having plenty of social athletic games in the open, their minds and bodies will come nearer to balancing.

If a child spends six hours a day indoors, studying under high pressure, that child is bound to get several hours of physical activity somehow, in order to strike a balance, and will crowd it into the night hours, if necessary, thus laying the foundation for nervous instability. The child whose program is balanced will be ready to rest at bedtime.

This plan would give the teachers, also, a chance for a better rounded existence and more individual attention to the

pupils, particularly the backward ones, and thus make their work more effective.

MRS. GEORGE B. BANGE,

Monroe, La.

[The value and practicability of the method here outlined has been demonstrated in a number of the institutions for the care of tuberculous children. In the Glen Lake Sanatorium, Minnesota, the children spend two hours a day in classes (dressed only in breech clouts and shoes) and the rest of the time in manual training work and healthful exercise, out of doors, when practicable, and in regularly adjusted sleep. When they leave the institution they are ahead of those who have pursued the regular curriculum.—Ed.]

Bloodless Delivery

In regard to the bloodless delivery discussed in *CLINICAL MEDICINE AND SURGERY* for 1929, on pages 196, 336, 409, 584 and 749, I wish to report one which occurred on the 30th day of July, 1930, in a multipara, this being her 6th child. There was not a drop of blood, except from the cord when it was cut, nor was there any following, at any time during the puerperium. The mother was up on the 5th day and has been now doing her work the past two days, with no distress whatsoever. I have positive proof of the facts by two eye witnesses.

A. H. BELTZ, M.D.

Eldorado, Ill.

[This is the second report of the kind by Dr. Beltz, the first having appeared in *CLINICAL MEDICINE AND SURGERY* for August, 1929, on p. 584. This is the eighth report in eighteen months. It seems strange that, if this condition is so relatively common, more has not been written about it.—Ed.]

The Office Treatment of Rectal Disorders

AS SICKNESS is not usually anticipated nor provided for in the family budget, it is usually a hardship and often a catastrophe for the great majority of people. The added expense for medicine, extra help, often for hospitalization and, if the afflicted one happens to be the breadwinner, the loss of income, too often leaves

the family financially embarrassed and the doctor unpaid.

While such a predicament cannot always be avoided, the physician can often help reduce the expense of sickness without seriously compromising the patient's welfare. By so doing he will make the payment of his own fee more prompt and certain.

First: He should not advise hospitalization when the patient cannot afford it, unless he believes it is necessary to the patient's recovery. Hospitalization may be easier on the doctor, but it usually is harder on the patient.

Second: When the financial support of the family is the afflicted one, he should be treated, if it can be done safely and satisfactorily, without being confined, even though it takes a little longer to obtain results. Speedy results are often of less moment to the patient than continuing his income.

Third: The physician should not overcharge the patient. He should observe the Golden Rule and make such a charge as he would wish made were he in the patient's position.

While this policy may not be equally applicable in all lines of practice, it can be more generally applied to the advantage of all concerned. In my work as a proctologist it has proved of advantage to both my patients and myself. It has been of advantage to patients by placing help within the reach of many who otherwise would have felt compelled to endure their ailments. It has been of advantage to me by thus increasing the number of my patients.

Hemorrhoids, for example, are so prevalent that it is estimated that 10 to 25 percent of the people are more or less afflicted. Yet the great majority of these continue to endure such discomfort, either because of the cost, from fear of an operation, or because they do not know that practically all such cases can be cured by painless and ambulant methods. That hospitalization and operation are not necessary, or even desirable in the majority of cases of hemorrhoids, is no longer questioned by those conversant with the progress of modern proctology.

Dr. Terrell, of Richmond, Virginia, has treated over 5,000 cases of hemorrhoids by submucous injections, with eminently satisfactory results. Dr. Howard, of England,

reports a like number. He, too, is enthusiastic over the results. Dr. Morley, of St. Mark's Hospital, reports more than 3,500 cases treated, with ever increasing confidence. Several years ago, Dr. Collier Martin reported 4,200 cases treated by himself and his father.

These are but a few of the increasing number of proctologists who are using these methods in their practice. In fact, in so far as I have been able to ascertain, no proctologist of standing now disputes the efficacy of such treatment, in properly selected cases.

Pruritus Ani, or so-called itching piles, is much more amenable to conservative than to radical treatment. The causative proctitis, cryptitis, fissure, fistula, skin tags or mucocutaneous infections seldom call for hospitalization or confinement.

Colitis, Proctitis and Sigmoiditis, except in extreme cases or in serious complications, need not be hospitalized. In fact, most of such cases do better if treated by ambulant methods. These patients are very prone to think too much about their condition. They are less introspective if reasonably active.

Fissures practically always respond to non-confining methods. Divulsion, excision, or infiltration can be satisfactorily performed in the office, just as well as in the hospital. Usually the patient can resume his regular vocation in twenty-four to forty-eight hours.

Strictures, in a very large majority of cases, are now handled better by gradual dilatation, applications of carbon dioxide snow or by heavy milliamperage of diathermy than by the more rapid and radical methods.

Fistula is another rectal condition that formerly was treated almost exclusively by hospitalization and radical surgery, and with results that were anything but satisfactory, in a large percentage of cases. While the more complicated fistulas should be operated upon in a hospital, most of them can be treated in the office by more conservative methods, with a higher percentage of satisfactory results. Fecal incontinence, that bugbear of fistula operations, need seldom, if ever, occur. Few patients would care to exchange a fistula for an incontinent sphincter. Where necessary, dividing the sphincter in two or more steps will tend to preserve the integrity of the muscle and the reputation of the surgeon.

The loud and insistent clamor, by those of limited means, for less expensive medical service is not altogether unreasonable. If we, as physicians, will consider the financial as well as the physical welfare of our patients, we will have more of them and fewer unpaid bills.

WILLIAM A. HINCKLE, M.D.
Peoria, Ill.

Medical Organization and the Individual Physician

MEDICAL organization is a fine thing and more necessary now than ever before, but it can go too far. The recent proposal that county medical societies be organized into business institutions or clinics seems to be an instance in point. This "chain clinic" idea might, conceivably, bring State Medicine upon us before we were aware what was happening.

This inclination to shift responsibility is, to me, a sign of weakness. Professional association should be kept distinct from the question of fees and every medical man should stand on his own feet. I believe that the well-informed general practitioner should, with proper equipment, be able to handle successfully ninety percent of the patients who come to him for help, without calling upon specialists and clinics to bolster himself up.

I believe that hospital facilities should be open to all licensed practitioners of medicine on the same basis—that of professional competency and personal honesty and rectitude; these points to be determined by the various boards of specialists or by a committee of the county medical society.

I believe that contract practice should be entirely abolished and that reports to industrial insurance companies should be declared unethical. The medical examinations mean nothing and the accepting of such

appointment is unfair competition against the man who has no such contracts. Even those who take advantage of conditions as they are (and that means most of us), must, if we are strictly candid, admit that these things tend to eliminate individualism in medical practice and that such elimination would lead to deplorable conditions.

G. J. WARNSHUIS, M.D.
Cedarburg, Wis.

[The present condition of things, as regards the business side of medicine (and that, necessarily, involves the professional side as well), holds so many possibilities for revolutionary changes that it may well engage the earnest consideration of every thoughtful physician, and the free exchange of ideas along these lines is to be encouraged.—Ed.]

(Continued from page 696)

than one month afterward. He was then very pale and thin and suffered from great physical weakness.

At the end of November, 1929, his weight was 113½ pounds; his bowels were acting three and four times daily (large, normal stools), immediately after each meal and frequently during the night. No loose or watery stools were passed.

The sputum showed no tubercle bacilli and the urine no albumin nor sugar. The Wassermann test was negative. He was eating four times daily and had no pain, but showed a continuing loss of weight.

The only diagnosis made was "slight anemia." The massive doses of Blaud's mass, plus liver and liver extract, raised the hemoglobin content of the blood to 60 percent, but produced no other change.

Requirements: Suggest the diagnosis, prognosis and treatment.

FEES FOR OPERATIONS

If it is necessary for a surgeon to perform a certain operation twelve times a year, in order to maintain his efficiency; and, if only four patients who can pay for such an operation apply to him within a twelve-month period, he has a right to require those four patients to pay for the eight operations it was necessary for him to perform, gratis, for their benefit.
DR. J. LEWIS WEBB, in Bul. Chicago M. S., March 22, 1930.

THE LEISURE HOUR

An Italian Picture of the American Medical Student

Le Siècle Médical, of Paris, May 15, 1930, prints the following squib, translated from the Italian journal *Annali d'Igiene*, regarding the American medical student:

A student who gives evidence of good notes during examinations is "bookish." He will never get on in life.

It is a fortunate matter that physics and physical chemistry can be assigned to oblivion without regret.

If a dissection must be made, let it be on a woman, so that one may gain the advantage of learning obstetrics.

In Medicine it is the diagnosis which matters; therapeutics doesn't count.

Neurology is only diagnostic legerdemain; as it is of no use, anyway, to help a patient, it is better not to bother with it.

Dermatology is easy: All skin troubles are treated with salicylic acid.

Pediatrics is the only specialty which suits our professional sisters; let them have it.

Nurses often fall easily to our wiles; but one's prestige is too easily lost to them.

Whoever goes to Europe to study doesn't learn anything much there; however, he gains in consideration.

It is better to practice in small towns. In the large cities too many go to the clinics.

On the other hand, the large city has its own advantages; work is more scientific there and one can make a name for oneself.

It is good to publish something so as to see one's name in print; it gets publicity.

Many Do

She: Where is your chivalry?"

He: "I turned it in for a Buick."—*Chanticleer*.

Diplomatic Firmness

Finkelstein was a good customer of Abe and Mawruss. He was, however, getting lax about his payment of invoices, and Abe suggested that Mawruss write him a strong but diplomatic letter calling his attention to this laxity.

Mawruss worked for several hours over the letter, then showed it to Abe for his approval. After reading it over carefully, Abe said: "By golly, dot's a wonderful letter. Strong and to the point, aber not personal or insulting. But you got a couple of mistakes in it, Mawruss. 'Dirty' you should spell mit only vun 'r', und 'cockroach' begins mit a 'c.'"

Dangerous Dan McCrobe

(Apologies to Robert W. Service)

A bunch of germs were hitting it up

In the Bronchial saloon;

Two bugs on the edge of the larynx

Were jazzing a ragtime tune.

Back of the teeth, in a solo game,

Sat dangerous Ack-Kerchoo.

And watching his pulse was his light of love,

The lady that's known as Flu.

—*Wall Street Journal*.

When a man past thirty begins to get soused at intervals, without apparent reason, you can bet he is doing it to forget that he has a wife—or to spite her.—*Fountain Inn Tribune*.

Sign of Convalescence

"And what did you say the patient did," asked the doctor, "when you ripped off the dressing?"

"Swore, doctor!" exclaimed the nurse.

"He swore frightfully!"

"Splendid! I reckon you can let him sit up tomorrow."—*Pharmaceutical Advance*.

Thumbnail Therapeutics

Streptococcic Vaccines for Colds

Relief or cure of acute colds was obtained in a number of cases from the use of vaccines consisting of the varieties of streptococci that were most prevalent during the periods when the colds occurred; and, in many cases, a specificity among the streptococci that seemed to cure was demonstrated.—DR. I. C. WALKER, in *Am. J. Med. Sc.*, Nov., 1929.

Gelatin Solution in Hemorrhage

Animal experiment showed that, following severe hemorrhage, intravenous injection of 5-percent gelatin solution restored the blood pressure to its original height and maintained it there for several hours. The solutions ordinarily used for intravenous injection following hemorrhage fail to maintain blood pressure at the elevated level.—DRS. W. L. WOLFSON and F. TELLER in *Am. J. Med. Sc.*, Oct., 1929.

Insulin in Pernicious Anemia

In a small series of pernicious anemia cases, insulin, either alone or associated with liver or arsenic, was found very effective. While a liver diet must be regarded as the standard remedy for pernicious anemia, insulin may be looked upon as an indispensable remedy. The initial dose is 20 to 30 units before meals, increasing, with improvement, to 40 units.—DR. L. VON VARGA, in *Lancet*, Oct 12, 1929.

Ephedrine in Gall-Stone and Renal Colic

In *Brit. Med. J.*, Nov 23, 1929, Dr. A. J. Ambrose, of London, reports that ephedrine was successful in relieving cases of gall-stone and renal colic. In these cases various remedies, including morphine, had been tried without avail, but a dose of $\frac{1}{2}$ grain (32 mgm.) of ephedrine hydrochloride gave immediate relief. This medication was

tried on the basis of its known action on striated muscle and the relief of spasm.

The Barbitol Hypnotics

Sir Maurice Craig believes that the hypnotics of the barbitol group may safely be used over long periods, under the rigid supervision of a physician, and that the effective dose need not be increased. Eddy has shown that there is little or no cumulative effect from these drugs, when given to cats. Tillotson states, that they should not be given to constitutional psychopathic inferiors nor to psychoneurotics, on account of the danger of habit formation.—Editorial in *J.A.M.A.*, Jan. 4, 1930.

Butesin with Metaphen in Oil

Metaphen in oil is sometimes painful, when used in hypersensitive patients with highly inflamed urethras. In such cases, the addition of 3 grains (0.2 Gm.) of Butesin to the ounce will obviate this discomfort, so that this valuable remedy need not be discontinued.—DR. FRANK B. KIRBY, Chicago.

A New Treatment of Angina Pectoris

On the assumption that angina pectoris is due to the deficiency of a specific hormone contained in the skeletal muscles, which causes cramp of the cardiac muscle, good results have been obtained in such cases by the subcutaneous injection of an extract of bovine skeletal muscle.—DR. SCHWARZMANN in *Muench. Med. Wchnschr.*, Aug. 9, 1929.

Crysarobin in Tinea Circinata

The best treatment for tinea circinata (ringworm) is to paint the affected spot with 10-percent crysarobin in collodion, and leave it on for 24 hours.—DR. WALTER J. HIGHMAN, of New York City.

Current Medical Literature

Acute Anterior Urethritis Treated with Acriflavine

In *Urol. and Cutan Rev.*, May, 1930, Dr. M. L. Boyd, of Atlanta, states that he now has 58 cases of acute anterior urethritis treated with acriflavine and cured without a single failure. This method is advocated only in the treatment of acute gonorrheal urethritis not more than 48 hours old, although it may be of use in older cases.

The treatment is given in the office. Two injections are made daily, spaced as far apart as possible. The patient is put in the semi-recumbent position and, after voiding, one or two drams (4 to 8 cc.) of 1:1,000 acriflavine solution are injected into the urethra and held there by finger pressure on the penis back of the glans. A piece of absorbent cotton, about 1½ inches wide, 1 inch thick and 6 inches long, is then doubled back over the penis, the pressure on the penis released and another piece of cotton of similar size is loosely wrapped around the other cotton and penis. The patient then holds the penis erect by encircling the cotton with his thumb and fingers and avoiding any pressure.

The acriflavine oozes into the cotton and the distal part of the urethra, the seat of the beginning infection, is not shut off from contact with acriflavine, as would be the case if the glans were pinched.

Seven days should be the limit of making these injections, as long-continued use may result in urethral stricture.

At the end of seven days warm irrigations of the urethra with potassium permanganate, 2 grains to the quart (137 mgm. to 1,000 cc.), are begun, the pressure being gradually increased with the view of causing dilatation and collapse of pockets and dislodging any cocci remaining in them.

The author says: "I have never before been able to promise my patients that if they came to me when their gonorrheal urethritis first begins that I could invariably stop the infection. Without acriflavine and the proper technic it can not be done; with acriflavine I know it can be done."

Biologic Test for Pathologic Tonsils

A great deal of effort has been expended in ways and means of establishing whether or not the tonsil is pathologic.

In *Illinois M. J.*, May, 1930, Dr. M. R. Guttman, of Chicago, states that, while pursuing some studies initiated in 1927 by V. Schmidt, he found that massage of a normal tonsil was followed by a leukopenia and that of a pathologic one by a leukocytosis of the peripheral blood, thus laying a basis on which

a test for the presence or absence of a pathologic process might be founded.

Experimental clinical tests have shown that massage of the empty fossae of tonsillectomized patients causes little or no change in the white count of the peripheral blood.

Leukocytosis follows only when the tonsil is the seat of an infectious process. The massage test is not specific for a pathologic tonsil but rather for a pathogenic-infected one. Consequently a negative test will not rule out a pathologic tonsil, except as regards its lack of infectivity. Massage of normal noninfective tonsils causes a fall in the peripheral white count similarly with hyperplastic noninfected tonsils.

A healed noninfected tonsil will not cause a leukocytosis of the peripheral blood.

The massage test is contraindicated in the presence of an acute or subacute process in the tonsils or in any systemic disturbance that may be predicated upon a tonsillar infection.

Clinical Syndrome of Hyperparathyroidism

An intensive study of hyperparathyroidism, based on the observation of several clinical cases, is presented by Drs. D. P. Barr and H. A. Bulger, of the Washington University School of Medicine, in *Am. J. Med. Sc.*, April, 1930. They find that the symptoms are similar to those produced by the experimental injection of excessive amounts of parathormone. They include hypotonia and diminished electrical excitability of muscles, decalcification of bones, hypercalcemia and abnormal excretion of calcium in the urine. In some cases there is nephrolithiasis. Hypophosphatemia has been observed.

Hypercalcemia is the most significant clinical sign in the diagnosis of hyperparathyroidism. Although it may be found in a few other conditions, its presence usually indicates increased function of the parathyroid glands.

Hyperplasia of the parathyroids and clinical evidence of hyperparathyroidism have been found in many cases of generalized bone disease, including rickets, puerperal osteomalacia, multiple myeloma and carcinomatous metastases to bones. The parathyroid changes appear to be secondary to the changes in bone. While in some cases the increased function of the parathyroids may possibly serve a useful function, in other cases it becomes actually harmful by increasing the decalcification of the bones.

In generalized osteitis fibrosa cystica (von Recklinghausen's disease), the clinical picture of hyperparathyroidism is most frequently encountered. It may possibly be primary and is unquestionably harmful. In such cases removal of parathyroid tissue has accomplished clinical improvement and apparent arrest of the progress of the bone disease.

Determinations of the calcium and phosphate content of the serum should be made in all cases of generalized bone disease, not only as a matter of interest, but because of their therapeutic indications.

Regional Vaccination at the Portal of Entry

In *Presse Méd.*, Paris, Mar. 22, 1930, Drs. A. Basset and P. Poincloux draw attention to the value of regional vaccination at the portal of entry; namely, injection of the specific vaccine of an infection, not merely as a local vaccination, but directly into the cellular groups through which the pathogenic germs have been enabled to invade the organism and irrespective of how distant from this portal of entry the lesions may be against which treatment is directed.

In this particular report the authors discuss the cases of 43 women with acute or subacute gonorrheal salpingitis, treated by injections of gonococcal vaccine in the urethra in the vicinity of Skene's glands. The usual initial dose was 0.125 cc. of vaccine in each Skene's gland. The reaction is observed within 30 minutes. A double dose is injected at 2-day intervals in the Bartholin glands or in the cervix. Usually within a few weeks all traces of salpingitis disappear.

The authors state that when the precise etiologic agent was found and the sensitized tissues could be reached with a specific vaccine, they have never seen regional vaccination at the portal of entry inoperative. The method is applicable to gonorrheal arthritis.

An Appendectomy in a Backwoods Home

In *J. Indiana St. M. Assoc.*, Mar., 1930, Dr. J. T. Freeland recites a case in which he successfully removed a gangrenous appendix from a young man in a backwoods, 2-room log cabin. The road of 5 miles, to the home from the pike, was an old, gravelly stream bed, full of treacherous holes; the aseptic arrangements had to be improvised and the family interfered to the extent that at least one insisted on seeing that the operation was actually done.

The general picture presented is almost akin to the pioneer ovariectomy of Ephraim McDowell.

Not every successful operation is performed in a modern hospital.

Immunization Against Diphtheria with Toxoid

The use of toxin-antitoxin to obtain diphtheria immunization has two serious drawbacks: (1) its varying value—about 25 percent of the subjects remain insufficiently immunized after three doses of toxin-antitoxin; (2) the danger of serum sensitization following its use.

In *Am. J. Dis. Child.*, Mar., 1930, Drs. A. B. Schwartz and P. R. Janney, of Milwaukee, refer to the excellent results of diphtheria immunization obtained with diphtheria anatoxin (toxoid),

according to the method of preparation perfected by Fitzgerald and Maloney, of the Connaught Laboratories, Toronto.

The authors, using toxoid obtained from the Connaught Laboratories (3 doses, 0.5, 0.5 and 1 cc., respectively), in children who had never had any previous injections of toxin-antitoxin, obtained immunity in 98 percent, as proved by Schick tests. Thirty-five (35) children, who had shown a positive Schick test after other material, were given three doses of toxoid, following which 34 gave a negative Schick test.

These results, the authors think, strikingly demonstrate the superiority of toxoid over other immunizing materials. The best age for diphtheria immunization with toxoid is about 1 year old.

The Doctor on the Witness Stand

The following suggestions to physicians on the witness stand are offered by Dr. J. R. Rosen in *Med. J. and Record*, Apr. 2, 1930:

1.—The doctor should familiarize himself with all the pertinent facts of the case.

2.—The doctor should investigate thoroughly the merits of his party's case, and thus determine whether the testimony asked of him is warranted.

3.—After studying the case and forming an opinion, the witness should consult and investigate the opinions of authorities, to see whether or not his opinion is worthy.

4.—If it is possible, the witness should confer with the physicians who are to testify on the opposing side.

5.—A doctor should never testify to matters, the veracity of which he doubts.

6.—A doctor who is to appear as expert witness is entitled to special compensation for the service to be rendered. If he is refused this compensation, he may refuse to appear and is not guilty of contempt of court, even though subpoenaed to appear.

At times a physician is called as an ordinary witness and during his testimony is asked a question which requires the opinion of the physician as expert. If the physician on the stand has not been in attendance on the party involved, he may refuse to answer any question which is beyond the scope of his appearance as ordinary witness. However, if he was in attendance, he is obliged to answer such questions.

7.—It is advisable, when giving testimony involving technical medical matters, to use the simplest language possible.

8.—Before answering a question it is best that the witness deliberate.

9.—It is always, best, when quoting figures, to give them accurately, if possible.

10.—Overenthusiasm frequently affects detrimentally the testimony given by an otherwise good witness. Overenthusiasm leads a witness to answer more than is asked for by the question.

11.—A witness is not expected to give a complete and positive answer to every question put to him. Therefore, when a question is asked of a witness the answer to which he does not know, the witness should unhesitatingly reply, "I do not know."

12.—A witness takes an oath that his testimony will be truthful. This oath he must fulfill.

13.—Self-control on the witness stand is a virtue. Invariably an opposing attorney, cross-examining a witness, will endeavor in certain ways to irritate the witness.

14.—It is not wrong or illegal for a witness to testify that immediately before the trial he had consulted his records of the case.

15.—In making records of cases in which a physician may be called upon to testify at a later date, it is best that such records be made personally by the physician, thus eliminating any doubt as to their correctness which doubt may arise should it be shown that the records were entered by a third person.

16.—A witness should never hesitate to testify that he consulted the attorney for his party prior to the trial. Such consultation is perfectly proper and all questions relating thereto should be answered frankly.

17.—Books on medical subjects are at times presented to a witness with the question as to his belief of their authority. A witness having made a statement which he believes to be true should not allow his belief to be shaken by a contrary statement read from a book.

18.—A physician on the witness stand is permitted to consult his records while testifying and should not hesitate to do so when he believes such consultation will enable him to answer a question more accurately.

19.—It is advisable for a physician who is to appear as a witness to familiarize himself thoroughly with the medical questions and topics allied to the main question involved in the case.

Treatment of Nontropical Sprue with Liver Extract

In *Am. J. Med. Sc.*, Mar., 1930, Drs. W. B. Porter and J. E. Rucker, of Richmond, Va., report that two patients, presenting the clinical characteristics of sprue, with marked degrees of macrocytic anemia but without monilia psilosis in the stools or on the mucous membranes of the mouth, were treated with liver extract and promptly relieved of all symptoms.

The hematopoietic response to liver indicates that the anemia was neither secondary nor aplastic, but associated with a megaloblastic hyperplasia of the bone marrow, and was fundamentally of the same type as the anemia of Addison.

The prompt relief in these cases suggests that non-tropical sprue is not a moniliasis of the digestive tract.

Bacteriophage Filtrates in Suppurations

Experience gained from the use of bacteriophage filtrates in the treatment of about 300 cases of various types of suppurations (chiefly of *B. coli* and staphylococcal origin) has proved to Dr. T. B. Rice, of Indianapolis, as reported in *Am. J. Med. Sc.*, Mar., 1930, that excellent results were obtained in about 90 percent of cases.

The filtrate used by the author was a meat extract, or meat infusion peptone broth, pH 7.6 to 7.8 when made, in which bacteria (autogenous growth) had grown for from 2 to 24 hours before being partly or completely lysed by the ad-

dition of active bacteriophage, and which was then, after 24 hours, passed through a Seitz or a Berkfeld filter to sterilize and remove matter in suspension.

The author suggests that the results obtained might have been due to the action of the bacteriophage as a lytic agent, to a *Besredka anti-virus effect*, to an antigen effect, to the conversion of the offending organism into an avirulent phase, or to the effect of the stimulation of the tissues by peptone broth. The main evidences of action were increased phagocytosis and liquefaction.

Stock preparations were found to be apparently as good as those specially prepared, except in a few cases.

Dosage did not seem to be important, provided the filtrate was used in sufficient amount to give good contact as a wet dressing. An increase of pus may occur within the first 24 or 36 hours and is a good sign.

Anatoxin (Toxoid) as a Diphtheria Immunizing Agent

Drs. G. Ramon and G. I. Hélie, of the Institute Pasteur and American Hospital, Paris, point out in *Am. J. Dis. Child.*, Apr., 1930, the rapid strides which diphtheria immunization is making in France. During 1927, the number of vaccinations was only 50,000; during the first 6 months of 1929 it reached 500,000. Vaccinations are being carried out now in Paris in an organized way, in hospitals, children's welfare centers, etc.

The standard technic is the injection dose of 0.5 cc. of toxoid; after 3 weeks a second injection of 1 cc. and two weeks later a third injection of 1.5 cc. The immunity is lasting. Cases of vaccination of 3 to 4 years standing show recurrences of only from 1 to 2 percent.

In one children's sanatorium, where the annual mortality from diphtheria used to be from 8 to 12 percent, only 2 very slight cases of diphtheria occurred in 1928, after the introduction of toxoid vaccination.

Mineral Oil and Digestion

There has been a rather widely prevalent idea or superstition that mineral oil, now so widely used as a laxative, has some tendency to interfere with digestion especially if taken at or near mealtime.

With a view to determining whether or not there is any basis for such an idea, experiments were undertaken, on both dogs and human beings, at the Pavlov Physiological Institute of the Battle Creek Sanitarium, the results of which are reported by Dr. Alfred B. Olsen, in *Bul. B. C. San. and Hosp. Clin.* for July, 1930. These results are summarized as follows:

1.—From the experiments on dogs it would seem that the use of liquid petrolatum, given by mouth, does not interfere with the digestion or absorption of protein food, as judged by the fecal waste of nitrogen.

2.—While the students considered their bowel action normal before the experiment, the fact is that all of them had a varying degree of con-

stipation. In most cases the oil encouraged better action and produced softer and more natural stools, although the effect was comparatively mild.

3.—The taking of 15 cc. of liquid petrolatum, with meals, three times a day did not appear to upset, hinder or in any other way interfere with the digestion and absorption of the food, as judged by the nitrogen and carbohydrate waste eliminated by the stools, nor did it affect appetite.

4.—The amount of nitrogen waste, as determined by fecal analysis, was not increased when the students were taking liquid petrolatum with each meal, but remained practically the same.

5.—What is true of the nitrogenous waste holds also for the carbohydrate elimination. Analysis shows that the amount of reducing substance in the feces is not increased by the taking of liquid petrolatum.

6.—The results of both experiments, in dogs and in human beings, indicate that the taking of liquid petrolatum by mouth, in therapeutic doses, did not interfere with the digestion and absorption of protein and carbohydrate food.

Gonococcal Complications Treated with Calcium Gluconate

Dr. R. D. Herrold, U. S. P. H. Service, Chicago, states in *Venerel Disease Information*, Feb. 20, 1930, that calcium gluconate has been used successfully in a series of patients with acute epididymitis, salpingitis, arthritis, lymphangitis and prostatitis, of gonococcal origin. The response in epididymitis was especially favorable, the average complete disability, in 6 cases, being only two days.

The gluconate should be given intravenously and slowly, 4 to 5 minutes being taken for the injection of 10 cc. of a 10-percent solution. In some cases the gluconate was given also by mouth, in doses of from 4 to 12 Gm. daily, beginning with the larger quantity. The drug may be given over a long period without any deleterious action, but usually injections given daily for 3 or 4 days; on alternate days for 2 or 3 injections; and then twice weekly, continued for a few weeks, suffice to render the patient gonococcus-free.

The favorable influence of calcium gluconate on the course of a severe iridocyclitis from a prostatic focus indicates that further observation should be made to determine its exact action in acute ocular infectious conditions, as well as in infections of cavities where insufficient drainage increases tension, as in the accessory nasal sinuses.

More intensive calcium treatment is possible with calcium gluconate than with the chloride, and the simultaneous use, intravenously and intramuscularly, is an advantage.

The use of calcium gluconate should not displace recognized measures of value, but further observations should be made to define more accurately its exact place in the treatment of acute infections of closed or partly closed cavities.

Zalewski, in cases of gonorrheal adnexitis, takes up 10 cc. of the gluconate solution in a

20-cc. syringe, withdraws 10 cc. of blood from the vein, mixes the two, reinjects half of the mixture into the vein and the other half deep in the gluteal muscles, thus combining the quick action of intravenous injection with slow absorption from the muscles, and also the effect of autohemotherapy.

The Heart and the General Practitioner

A physician should be slow in diagnosing heart disease without a thorough examination. Dr. G. C. Hall, of London, Canada, in *Canad. M.A.J.*, Apr., 1930, remarks that, given a group of patients with suspected cardiac disease, the best procedure to follow, in order to separate those with heart disease from the others, would be to place on the list of suspect or proved cases of organic cardiac disease those with:

- 1.—A history of acute rheumatic fever, or a history of any severe infection definitely antedating the appearance of the cardiac symptoms.
- 2.—A diastolic murmur.
- 3.—Enlargement of the heart.
- 4.—Evidence of hyperthyroidism.
- 5.—Pain of anginal distribution.
- 6.—A pulse of irregular irregularity, with the rhythm not improved by exercise.
- 7.—An abnormally rapid or slow pulse.
- 8.—Evidence of venous congestion.
- 9.—A positive Wassermann test, high blood pressure, or urine of low and fixed specific gravity.

The final conclusions in this group will be based on a balancing of all symptoms and signs.

The Chemotherapy of Infections

Experience has shown that it is necessary to modify the two conceptions which hitherto have dominated the chemotherapy of infection, namely: The conception of it as a *therapia sterilisans magna*; and that of a special chemical affinity between the organisms and the dye compound used.

In *J. Chemotherapy*, Jan. 1930, Dr. R. A. Kilduffe, of Atlantic City, suggests the following premises as indicating a logical, if temporary, working procedure for chemotherapy:

1.—That the presence of bacteremia be culturally established as a preliminary to intravenous dye compound therapy. This, of course, necessitates the bacteriologic study of the blood stream at a time approximating as nearly as possible the bacterial invasion. In other words, the possibility of bacteremia should be thought of and a blood culture taken as soon as the initial chill and sudden marked rise of temperature suggest blood stream invasion, and not left until bacteremia has existed for days.

2.—That, not only the kind, but the degree of bacteremia, in terms of colonies per cubic centimeter of blood, be established by proper manipulation of the primary culture.

3.—That the choice of dye compound be determined, in some degree at least, by the degree to which it is efficacious for the bacterial species in question. This, of course, suggests the necessity for careful, systematic and extensive restudying of various dye compounds in

relation to, at least, the more common pathogenic bacteria, so that the extent and limitations of selectivity on the part of dye compounds may be clearly established and more generally appreciated.

4.—That the dose be regulated by the degree of bacteremia, the bactericidal effect being sought for to the highest degree, in infections where the bacterial content is comparatively light, as evidenced by a small number of colonies per cubic centimeter in the primary blood culture. In such cases, a relatively large dose may be given at the start. In heavily infected cases, on the contrary, where massive and sudden absorption of large doses of endotoxin is not to be desired, the bacteriostatic effect of the dye compound is more to be sought for and achieved by comparatively small doses.

5.—The frequency of dosage to be governed, in the main, by two factors: (a) The state of the bacteremia, as established by cultures taken before each dose; (b) the clinical condition, as indicated by cytologic studies of the blood, the leukocyte count, and, notably, the leukocytic index. The leukocytic index is a valuable means of correlating the leukocyte counts with the clinical condition. Based upon the fact that polymorphonuclear increase takes place at the expense of the lymphocytes, the leukocytic index is obtained by dividing the polymorphonuclear count by the total (large and small) lymphocyte count. Under normal conditions the index will be between 1.9 and 3. In the presence of active and triumphant infections, the index may reach 35 to 40, or even higher. In the author's experience, the leukocyte index has been a distinct aid in regulating the frequency of administration of dye compounds, being unaffected by variations in the total and absolute counts.

6.—That treatment of the initial and secondary foci, when accessible, be considered an important, if not essential, part of the procedure.

7.—That the expectation of success be largely governed by the location and character of the secondary foci.

8.—Finally, that the resort to intravenous therapy by dye compounds be not left until the patient is in extremis.

Prognosis and Treatment in Schizophrenia

Up to rather recently, the prognosis in schizophrenia (dementia precox) has been considered quite hopeless and institutional care has been the only line of management suggested.

During the past few years there has been a marked change in this attitude and many psychiatrists are coming to believe that much can be done, for the early and mild cases ("paraphrenias"), by physical measures and by psychotherapy.

Dr. A. A. Brill upholds this latter thesis in an article in *Am. J. of Psychiatry* for Nov., 1929, and presents outlines of several cases of this psychosis, treated by modified psychoanalysis, with pleasing results; so much so that he now feels that only those schizophrenics who cannot be kept at home should be sent to institutions, as the conditions in such places often tend to aggravate the malady.

The treatment is long and laborious (frequently five years or more) and few except trained and eager psychoanalysts or psychotherapists would be likely to care to undertake it, but it is of interest to every physician to know that there is hope of social or even economic adjustment for a considerable number of these persons who were formerly believed to be beyond the hope of amelioration.

Pituitary (Anterior Lobe) Extract in Gynecology

In cases of amenorrhea of the infantile type—usually in young women who are backward in growth, whose genital organs are underdeveloped, secondary sex characteristics poorly marked and thyroid glands small—pituitary (anterior) extract medication has been found very effective by Dr. Roulland, of Paris.

Dr. Roulland combines calcium and phosphorus with the anterior pituitary substance and supplements the endocrine treatment with epinephrin for a short time. For 10 days before the menstrual period he prescribes fifteen drops of epinephrin (1:1,000), three times a day, for 10 days following menstruation he prescribes desiccated anterior pituitary 1.5 gr. (0.1 Gm.); calcium lactate, 15 gr. (0.97 Gm.); calcium phosphate, 4.5 gr. (0.292 Gm.), one capsule three times a day. The calcium is given for the calciprivia and to improve the vagosymphathetic tone, which is usually disturbed in such patients.—Editorial, in *Med. Herald and Phys. Therap.*, Apr., 1930.

Skin Complications of Gonorrhea

Skin complications of gonorrheal origin are rare, but erythema, purpura and thickenings, of gonorrheal origin, are known. In *Am. Med.*, Feb., 1930, Dr. W. Scott Pugh, of New York, reports 2 cases of localized abscess, one on the breast bone of a woman of 26 and the other in the armpit of a woman of 35. From the pus of both abscesses gonococci in pure culture were cultivated in profusion. In both of the cases the skin infection was the result of direct local implantation of the germs. In the third case, a female child of 5 years, with marked vulvovaginitis, papulo-pustular lesions appeared on both thighs in the vicinity and suggest a transfer of the gonococcus by the blood stream. In this latter case, smears revealed abundant gonococci.

Making Patients Understand

Too many physicians are prone to forget that they have had many years of special training, and to assume that their patients will understand discussions and instructions couched in technical language, or to treat them like fools and refuse to listen to their rambling stories, which very frequently, if studied, will give the key to the diagnosis.

In *Lancet* (London) for Oct. 5, 1929, Sir E. Farquhar Buzzard, M.D., gives a plain-spoken and (if accepted and digested) a helpful discussion of the arrogance of physicians and the ignorance of patients, and declares that the

physician who would be successful must train himself to answer questions with nothing but the truth, but to use judgment in imparting the whole truth. He must learn to use language intelligible to his patients and must never hesitate to say that he does not know, if that is the fact.

Our ignorance on medical matters is comparative; but that of the public is superlative. We must never allow ourselves to feel apologetic when the public clamors for specific "cures" for all diseases. Disease is not a simple thing, like a chemical reaction, and there are many morbid states for which we are never likely to find specific cures.

The fact that we have found no "cure" for cancer, acute poliomyelitis, encephalitis, the "common cold" and other disease conditions does not mean that we know nothing about them. The mass of information is large and is steadily accumulating. We have no cause to be ashamed of it and should not talk as though we were.

If our profession is to attain its rightful position, we must cease to profess "cures," and be content to show the public that our knowledge, though still limited, is sufficient to warrant the confidence of our patients in our ability to help them.

Peroral Administration of Insulin

In *Presse Méd.*, Paris, Mar. 22, 1930, Dr. W. Fornet, shows that insulin is resistant to digestive fluids and is reabsorbed by the intestine. While, for rapid action in advanced diabetes, injection of insulin is necessary for immediate effects, in less urgent cases the carbohydrate metabolism can be regulated by a restricted diet and insulin administered in pill form.

The recent results of Knorr, of Budapest, are cited as a proof of the value of peroral insulin therapy. Knorr's 41 patients, not only showed the usual weight increase of 4 to 5 kilograms during the 6 to 8 weeks of treatment, but also a regular increase of 20 percent in the number of red blood corpuscles and a 20 percent increase of hemoglobin.

Theocalcin in Congestive Heart Failure

From the Hospital of the Rockefeller Institute, New York, comes an interesting report by H. J. Stewart on the use of Theocalcin in the treatment of heart failure of the congestive type (*J. Clin. Investigation*, Vol. VIII, No. 3, April 20, 1930).

The majority of the patients were of the arteriosclerotic group and a few in whom cardiac disease was of rheumatic origin. Following the administration of Theocalcin to 16 patients with heart failure of congestive type, diuresis occurred in 11. In two of the other 5 patients there were reasons for ineffectiveness of the drug. In 8 of the 11 patients diuresis was sufficient to free the patients of signs of heart failure, in 2 it was partially effective, in one it is impossible to estimate the part it played, as it was given simultaneously with other drugs.

Summing up, Dr. Stewart states:

1.—Theocalcin given by mouth in doses of 1.0 to 1.5 gram three times a day induced marked

diuresis in the majority of patients suffering from heart failure of the congestive type.

2.—It was sometimes effective when other therapeutic agents failed and it appeared to be more effective than Theocin (synthetic theophylline) and Diuretin (theobromine-sodium salicylate).

3.—Toxic symptoms (nausea and vomiting) occurred infrequently during its administration and were transient. It appeared to be more easily tolerated than Theocin and Diuretin.

4.—Diuresis usually begins during the first 24 hours of administration, but it may not reach a maximum until after it has been administered for several days.

5.—The drug can be given as long as diuresis lasts. It may be given as long as it maintains the output of urine near the fluid intake.

Anal Fissure Treated by Injections of Quinine and Urea

The method of treating anal fissures by injections of quinine and urea was first described by Bensaude and associates in *Bull Soc. Méd des Hôp.*, Paris, Jan. 10, 1930.

A solution of the double hydrochlorate of quinine and urea (5 percent) is used. The needle is inserted just above the external extremity of the fissure. It penetrates from 4 to 5 mm. and while it is being pushed in, the fluid, in quantity about .25 cc. is injected. A single injection sometimes suffices, or a second injection may be made two or three days later.

The injection is painful but the pain subsides very rapidly.

The method is stated to be very successful.—J. D., in *Presse Méd.*, Paris, May 3, 1930.

Methyl Alcohol Poisoning

A clinical and pathologic study of methyl alcohol poisoning, based on 11 fatal cases, is given by Dr. E. C. Burhans, of Peoria, Ill., in *Illinois M. J.*, Apr., 1930.

The symptoms and signs noted in these cases were: Weakness; headache; dimmed vision; abdominal pain and vomiting; dyspnea and cyanosis, with severe acidosis; convulsions and coma. Death occurs from cardiac or respiratory paralysis.

The post-mortem findings in these cases are characteristic: Degeneration of the retinal cells and optic nerve; hemorrhagic pancreatitis; degeneration of the liver; degeneration of the kidneys; general visceral congestion.

The treatment is supportive and eliminative.

Manganese Chloride Treatment of Psychoses

The literature shows that there are rational bases for the use of injections of metal salts in the treatment of psychoses and, in 1927, Reiter, of Denmark, reported favorable results in 50 cases of schizophrenia so treated.

In *Amer. J. Psychiat.*, Nov., 1929, Dr. W. M. English, reports the results obtained from this method of treatment by intravenous injection.

tions of manganese chloride in 181 cases of schizophrenia, 33 of manic depression and 16 of other psychoses, at the Ontario Hospital.

The dose administered was from 1 to 8 cc. of a 1:400 solution, twice a week; this was continued for 10 weeks, a second course being given in some cases after a two-month interval.

The immediate reactions were slight; in general a slight increase in the pulse rate persisted.

In cases where a psychosis had existed for a considerable period (10 to 49 years) the improvement noted though considerably less than in ordinary cases, was yet sufficient to justify the treatment being continued.

Of the 230 cases, 111 were improved physically and 74 mentally. Seventy (70) were improved both physically and mentally. There are 21 patients either discharged or on probation. The general welfare of patients was much improved and the majority of them were able to be up and about and engaged in useful employment, so that the constant and exacting care of nurses was considerably lessened.

Uterine Fibroids

Based on 233 cases actively treated, Drs. W. C. Danforth and R. M. Grier, of Evanston, Ill., express, in *A. J. Obst. & Gynecol.*, Mar., 1930, the opinion that mortality in the treatment of fibroid tumors of the uterus today should be 1 percent or less. A mortality rate materially higher than this may justifiably raise a question as to efficiency of management.

Operative treatment and irradiation are not competitive methods. One or the other should be chosen by intelligent discrimination. Irradiation is contraindicated in young women, in the presence of a large tumor and in the presence of adnexal inflammation or neoplastic changes in the ovary.

Supravaginal hysterectomy is the operation of choice in the majority of cases. Myomectomy is of value in selected cases. The ovaries should be preserved in young patients if possible.

Ununited Fractures

Speaking before the Chicago Society of Industrial Medicine and Surgery, Dr. M. S. Henderson, of the Mayo Clinic, said that, in his experience, inadequate fixation is a prominent factor in failure of union of fractures. A disregard of the simple mechanics necessary when traction is applied is often seen, for example, in allowing the foot to rest against the foot of the bed or the weight to rest on the floor.

It is astonishing how often there is seen apparatus, carefully applied, that has not been kept up and is not doing its work properly.

Injury to the blood supply, undoubtedly, is a prominent factor in nonunion, especially where much of the bone is not surrounded by vascular muscles. Injury to the nutrient vessel will seriously impair the blood supply to the middle of the shaft.

Metal is often blamed for the failure of fractures to unite but it is questionable if the metal itself is to blame, rather than insecure fixation of the plates.

Dr. Henderson believes that, other things

being equal, fractures that are followed by operation are somewhat slower to gain union than those that are not.

In old nonunion cases, of 5 to 20 years duration, the fractures are in a state of physiologic inertia and there is no hope of union except by surgical intervention. Dr. Henderson prefers to use the "massive" bone graft, fixed with beef-bone screws.—*Bull. Chicago Med. Soc.*, May 17, 1930.

Administration and Dosage of Strophanthin

The actions of strophanthin and digitalis differ very markedly. Strophanthin increases myocardial contractility and tonicity while, apparently, digitalis has no such effect. Strophanthin is used for myocardial weakness.

In *M. J. and Record.*, Apr. 2, 1930, Dr. E. E. Cornwall, Brooklyn, N. Y., states that, in a large proportion of cases, sublingual administration of strophanthin suffices, and hypodermic injection suffices in most of the others. It is only in cases of emergency that intramuscular and intravenous injections are called for.

An ambulant case of heart failure should not receive more than 1/1000 of a grain (0.065 mgm.), sublingually, every four hours.

In pneumonia, if the signs of heart failure appear, the dose should be as above or three times a day. If heart failure becomes pronounced, the dose is increased to 1/500 of a grain (0.13 mgm.) which is given sublingually if the heart failure is still moderate, but hypodermically if it is of considerable degree. If the pulse is very rapid and considerable pulmonary edema is present, the dose may be increased to 1/250 grain for a short time.

Cases of chronic myocardial degeneration are treated in much the same way.

In acute endocarditis with heart failure, and in other acute disease with fever and heart failure, strophanthin may be given in small doses. The contraindications to digitalis in these acute febrile cases do not apply to strophanthin.

In chronic cardiac valvular disease, in aortic and mitral incompetence and in mitral stenosis with auricular fibrillation, strophanthin is indicated if there is much intrinsic myocardial weakness, the dose varying, as above, according as the patient is ambulant or resting in bed. In small doses, strophanthin may be continued for long periods.

Treatment of Hypertension with Potassium Thiocyanate

Dr. M. H. Fineberg, of Cleveland, reports in *J.A.M.A.*, June 7, 1930, upon the results in 58 cases of hypertension (patients varying from 22 to 74 years old), treated first with sedatives and then with potassium thiocyanate.

The sedative treatment was continued, in all cases, for 3 months or more and a drop of at least 30 mm. in the systolic or diastolic pressure, or in both, was observed in 22 patients (37 percent). There did not appear to be any relation between the ages of the patients and the amount of improvement shown. The improvement was both objective and subjective.

The sedative course consisted of either sodium bromide or phenobarbital. The bromide was given in 15 grain (0.97 Gm.) doses three times a day. The phenobarbital was given also thrice daily, in doses of from $\frac{1}{4}$ to $\frac{1}{2}$ grain (16 to 32 mgm.). General hygienic measures were also applied.

The patients in whom the sedative drugs had been tried were then placed on potassium thiocyanate in doses of $1\frac{1}{2}$ grains (0.097 Gm.) three times a day, which dosage was continued, in the majority of cases, for a 3-month period. In only one of 13 such patients followed was there any significant lowering of the blood pressure.

But in 22 patients given potassium thiocyanate (8-percent solution), in doses of 5 grains (0.3 Gm.) three times daily, 12 (57 percent) showed a fall in the systolic pressure of 30 mm. or more.

Subjective improvements were greater with sedatives but pressure fall was more marked with potassium thiocyanate.

Pure Oxygen Inhalation in Therapeutics

In *Canad. M.A.J.*, Apr., 1930, Dr. J. H. Evans, of Buffalo, N. Y., reports that he has administered pure oxygen, by means of the face mask and nasal inhaler, to more than 100 cyanotic patients, for periods varying from 1 to 27 days, the administration being as nearly continuous as possible. Taking into account leakage, etc., it is probable that pure oxygen was not delivered to the lungs for more than 16 hours a day, on the average.

Pure oxygen was administered to 143 pneumonia patients, among whom there were 74 recoveries and 69 deaths; but these were all cases in which the prognosis was bad.

Pure oxygen was also given in some cases of cardiac decompensation, asthma, hay-fever, influenza, etc.

The author is of opinion that this treatment gives only beneficial results. In pneumonia the administration of pure oxygen is a potent factor in reducing mortality. The administration of oxygen, for from one to several hours daily, has proved beneficial in the other diseases mentioned.

Intestinal Obstruction

Dr. C. Jeff Miller, of New Orleans, dealing with intestinal obstruction, in *Am. J. Surg.*, March, 1930, states that exploration is warranted on the barest suspicion that obstruction exists; the mortality rises approximately 1 percent with each hour of procrastination.

A properly made exploratory incision seldom does harm, and it is a better thing to open the abdomen and find nothing than to open it, after days of delay, when a moribund patient carries his diagnosis on his face, and find pathologic conditions which, because priceless time

has been lost, no amount of surgical judgment and no exhibition of surgical dexterity can possibly remedy. The surgeon who operates for obstruction only when the diagnosis is confirmed by the full complement of symptoms, may achieve an enviable reputation for diagnostic acumen, but it will be in the autopsy room, for he will have few living patients to his credit.

In relieving the obstruction, the least that can be done is the safest for the patient.

In the average case of intestinal obstruction there is no time for rehabilitation of the patient. Two things must not, however, be omitted. Gastric lavage must be instituted and repeated until it returns clear, and hypertonic salt solution must be promptly given, preferably by infusion, to restore the fluid balance and replace the lost chlorides.

Milk Injection in Pelvic Infection

Foreign protein therapy has been proved to give good results in many cases of infection. Based on experience in 22 cases of pelvic infection, Dr. P. M. Murray, of New York, in *Am. J. Surg.*, Mar., 1930, reports that:

1.—Milk injection is a valuable adjunct in the conservative treatment of pelvic infection.

2.—It is without uncomfortable local or systemic reactions, except in a very small percentage of cases.

3.—Marked increase in the total leukocyte count and a corresponding increase of the polymorphonuclear count is the rule; in 77 percent of cases, the temperature promptly returned to normal after milk injections.

4.—Definite clinical improvement was noted in 60 percent of cases.

The average number of injections given was 4.8. Ordinary ice-box milk is used, boiled for 10 minutes in a sterile test tube in a water bath.*

Cinemascopy

Cinemascopy means the photographing of the interior of the bladder through a cystoscope.

In *Urol. and Cutan. Rev.*, May, 1930, Dr. J. J. Stutzin, of Berlin, reports that, after some years of experimentation, he has so improved the optics of the Nitze cystoscope that it is quite possible to obtain sufficiently strong light to take clear photographic pictures of the interior of the bladder. This has been arranged on the cinematographic principle, so that a continuous picture is recorded.

The principal value of this process lies in the extension of didactic instruction. The cystoscope was limited and the view was fleeting. With the new arrangement, permanent records can be made and exhibited to a large number whenever desired.

*The ampules of fat-free milk (such as Lactigen or Aolan), now available commercially, are more convenient, time-saving and assure sterility.—Ed.

NEW BOOKS

Wolbarst: Gonorrhea in the Male

GNOCOCCAL INFECTION IN THE MALE. By Abr. L. Wolbarst, M.D., Urologist and Director of Urologic Clinics, Beth Israel Hospital; Consulting Urologist, Central Islip State Hospital, etc. Second Edition, Completely revised and Enlarged. With One Hundred Forty Illustrations, Including Seven Color Plates. St. Louis: C. V. Mosby Company. 1930. Price \$5.50.

The first edition of Dr. Wolbarst's manual on gonococcal infection in the male was reviewed in *CLINICAL MEDICINE AND SURGERY*, Feb., 1928, and the fact that a second edition has been so quickly called for shows that the book met with a definite response from the profession.

While the urologists' special methods of treatment are fully described, Dr. Wolbarst's views lean toward the idea that gonorrhea should be regarded rather as a constitutional disease—one that can be cured only by the inherent reparative forces of the individual, acting through the blood stream. In harmony with this etiologic concept, the handling of the disease is considered to be, to a very large extent, one for the general practitioner rather than for the specialist. In this connection the author's views are evidently influenced by the conception of McDonagh's iconoclastic ideas regarding the nature of disease in general and their treatment by the electrical action of suitable chemical drugs.

The second edition has been thoroughly revised and all important additions regarding the etiology, diagnosis and treatment of gonorrhea, (including physical therapy methods), coming to light since the first edition was issued, have been included and discussed. There are numerous apt and practical illustrations, several of which are in colors—one showing results of the "three-glass" test.

The work may be strongly recommended to general practitioners who particularly need one that gives the newer current ideas on the nature of this particular microbic disease and clear descriptions of practical measures for its treatment.

Collins: Insomnia

INSOMNIA: How to Combat It. By Joseph Collins, M.D., Author of "The Doctor Looks at Love and Life," etc. New York: D. Appleton and Company. 1930. Price \$1.50.

The fear of insomnia is often the beginning of a neurosis. Not the loss of sleep itself, observe (for experiments have shown that this is

by no means so serious as many believe it to be), but the dread and the worry over it.

Many factors enter into the chronic sleeplessness but, aside from a few rather readily remediable physical conditions, most of them are psychic; and the cure of the condition is also psychic.

It is, therefore, highly proper that a book on insomnia should be written by a neuropsychiatrist; and it is highly agreeable that the author should be an expert in the use of words, like Dr. Collins, whose literary reputation is well established.

Fifty pages of this little volume are devoted to the physiology of sleep and the physical causes of sleeplessness; the other seventy-five pages dealing with the psychic aspects of the condition, including many interesting and helpful suggestions for invoking the Sand Man.

This is a book for laymen, written in a pleasant and readable style and containing much material which any physician can read with profit, before handing it over to some patient who needs to be fortified against the positive dread with which the insomniac approaches the hour when custom decrees that his head shall be laid upon his pillow.

Lyle and De Souza: Physiology

MANUAL OF PHYSIOLOGY: For Students and Practitioners. By H. Willoughby Lyle, M.D., B.S. (Lond.), F.R.C.S. (Eng.), Fellow of King's College, London, Consulting Ophthalmic Surgeon to King's College Hospital and Emeritus Lecturer on Ophthalmology in the Medical School, etc. and David De Souza, M.D., D.Sc. (Lond.), F.R.C.P. (Lond.), Physician to Westminster Hospital and Lecturer on Medicine in the Medical School; etc. Third ed. With 3 Plates and 138 Figures in the Text. New York: Humphrey Milford, Oxford University Press. 1930. Price \$5.25.

The authors have designed their book, which has now run to the third edition, not only as a comprehensive manual of physiology for the student preparing for examination, but also as one that may be of use to the practitioner, as indicating the bearing of physiology on the practice of medicine and surgery.

The work is divided into 15 sections, each of which deals with the physiology of one of the organic systems. The treatment of the subjects covered is concise, comprehensive and up-to-date, and the volume contains all the essential facts that any practitioner needs to know. The chapter on mental physiology might,

however, be extended with profit, as psychologic medicine is taking a rather prominent position at the present time and is likely to extend its scope in future practice.

Medical Clinics of North America

THE MEDICAL CLINICS OF NORTH AMERICA. Univ. of Calif. Number. Volume 14, Number 1, July, 1930. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per Clinic year, July 1930 to May 1931: Paper \$12.00; Cloth \$16.00.

The July 1930 number of the Medical Clinics of North America departs, in its arrangement, from the usual custom of presenting a collection of local clinics from one city. In this issue all the clinics are given by Dr. L. F. Barker, of Baltimore. The University of California, in 1929, established a visiting lectureship in the medical school, Dr. Barker being the first appointee.

This number contains 32 clinics given by Dr. Barker, in ward rounds and clinical conferences, as well as amphitheater clinics, at the California University medical school during Nov.-Dec., 1929. The clinics, which cover a large variety of subjects, are given with the clinical acumen and force as well as the clarity of expression which have always been distinctive of Dr. Barker's style, making this number one of unusual interest and value.

Walsh: Personality

CULTIVATING PERSONALITY. By William S. Walsh, M.D., author of "The Inferiority Feeling," etc. New York: E. P. Dutton & Co., Inc. 1930. Price \$2.50.

It is well recognized that physical health and intellectual power are large factors in the attainment of success, but another factor which is often overlooked is that rather intangible something which we call personality—the sum of one's individual reactions, physical, emotional and mental, to the vicissitudes of life.

In this volume, Dr. Walsh has set out to assist those who recognize that their personalities are defective in one or more ways, to correct the errors which lead to such deficiencies. To that end he discusses the nature and sources of personality and the part which it plays in successful living, and considers the influences of the instincts and the various personality types.

About half of the book consists of an analysis of the commonest and gravest personality faults—such as derogation, snobbishness, irritability, depression, etc.—and suggestions as to how these faults may be overcome.

Of course, these are things which are rather impalpable and difficult to deal with in a dogmatic manner; but dogmatism seems to be of the essence of effective teaching and, after one has read one of the chapters one has obtained, as a rule, little more than a recitation of pleasant platitudes on the subject, quite unlike the definite recommendations of procedure which are found in such books as Dimmet's "Art of

Thinking" and Ernest Wood's "Character Building."

The book is far too long to best serve the purpose for which it was apparently intended, and the type is too small for easy reading. The author could have said what he had to say better in half the number of words, and the publisher might then have dressed the pages up with wider margins, clearer type, subheads and fancy initials, so as to catch the attention and hold the interest.

A rather tiresome book on an important subject.

Perry: Dietetics

DIETETICS AND NUTRITION. By Maude A. Perry, B.S., Formerly Director of Dietetics at the Michael Reese Hospital, Chicago, Illinois, and at the Montreal General Hospital, Montreal, Canada. St. Louis: The C. V. Mosby Company. 1930. Price \$2.50.

The demand for information on dietetics and nutrition must be very great, if one judges by the number of books published on this subject.

The author presents scientific and technical material in the field of dietetics and nutrition in plain and simple language, to meet the needs of schools, training schools for nurses, physicians, teachers and all others who are interested in this subject.

While the book is, to a great extent, frankly a compilation from many sources, the author's former position as Director of Dietetics at the Michael Reese Hospital, Chicago, and elsewhere, entitles her to express original and authoritative remarks on the subject founded on practical experience and the work may be recommended as a guide to anyone seeking a good practical knowledge of dietetics.

Roerich: Shambhala

SHAMBHALA. By Nicholas Roerich. With a frontispiece in color by Svetoslav Roerich. New York: Frederick A. Stokes Company. 1930. Price \$2.50.

About every two thousand years the world draws a long breath and pauses with expectation: A great Teacher comes, and with his coming a change is wrought in thought and development—a New Era.

Roerich has spent many years in painting and studying in Tibet and Central Asia and is peculiarly fitted, by temperament, to meet the Eastern peoples spiritually and to make them his friends. He is in love with life. He is pre-eminently an artist, but with a poet's soul. Everywhere he travelled, he heard of the Coming and that the time is at hand when the "Blessed One will once again come from the North to the South."

Shambhala! One of the three great names of Asia! And it is becoming known in the West. What is it? Where is it? Is it merely a symbol, or has it a geographic location, as many believe? Will the great new force of the New Era proceed from there?

The first chapter, "Resplendent Shambhala" is a conversation between Mr. Roerich and a very wise and spiritual old Lama, and one feels the great depth of secret knowledge which he possesses and which colors the whole of the Orient.

The remaining chapters are like jewels, strung on a thread of love and spiritual insight into a little-known people—gleanings from the customs, life and faith of a people which the author knows and reverences.

To appreciate the book, it must be read in the same spirit in which it was written, so that one may be able to read between the simply and poetically written lines.

While reading, one forgets this world and lives in another. It brings peaceful thoughts and a hope that we, too, may find the road which leads to "Shambhala the Resplendent."

M. B. L.

Medical and Surgical Year-Book

MEDICAL AND SURGICAL YEAR-BOOK. PHYSICIANS HOSPITAL OF PLATTSBURGH. Comprising, Wednesday Afternoon Invitation Lectures, Papers of The Cardiac Round Table, The First Beaumont Lecture, Collected Papers by the Staff. Plattsburgh, N. Y.: The William H. Miner Foundation. 1930. Price \$3.50.

The Medical and Surgical Year-book of the Physicians Hospital of Plattsburgh, N. Y., contains the papers presented during the summer course in cardio-nephritis, the invitation lectures, the papers presented at the Cardiac Round Table and the collected papers by the staff of the institution.

The clinical material and studies on cardiac lesions presented here are particularly rich and instructive and these papers, which form the bulk of the volume, give ample justification for their publication in book form. This hospital apparently specializes in the clinical study of cardio-renal diseases. It would be a good thing if the practice of hospitals taking up special lines of clinical research were extended.

The general bookwork deserves special commendation.

Berkeley: Diseases of Women

DISEASES OF WOMEN. By Ten Teachers, under the direction of Comyns Berkeley, M.A., M.D., M.C. (Cantab.), F.R.C.P. (Lond.) F.R.C.S. (Eng.) Obstetric and Gynecological Surgeon to the Middlesex Hospital, etc. Edited by Comyns Berkeley, H. Russell Andrews, J. S. Fairbairn. Illustrated. Fourth Edition. New York: William Wood and Company. 1930. Price \$6.00.

This compilation is the work of ten leading English teachers of gynecology and obstetrics, under the direction of Dr. Berkeley, written as a companion volume to a similarly made up manual on midwifery.

The book is a concisely written account of the pathology of the female sexual organs, arranged in 11 chapters, the last one of which is devoted to gynecologic operations. Each chapter is composed in the same methodical manner, dealing with etiology, symptoms, diag-

nosis, etc. Students preparing for examination will find here all the necessary facts, given without redundancy, and general practitioners can use the book with profit, as covering ordinary gynecologic lesions, especially as regards diagnosis.

Brockman: Club-Foot

CONGENITAL CLUB-FOOT (Talipes Equinovarus). By E. P. Brockman, M.Chir., F.R.C.S., Orthopedic Surgeon, Westminster Hospital; Assistant Surgeon, the Royal National Orthopedic Hospital; Surgeon to St. Vincent's Orthopedic Hospital. New York: William Wood and Company. 1930. Price \$4.00.

This monograph on congenital talipes equinovarus—club-foot—is based upon work especially carried out by the author in the orthopedic department of St. Thomas's Hospital, London, Eng. It was awarded a gold medal by the British Orthopedic Association.

The book covers the history, normal and pathologic anatomy, etiology and the results of various types of treatment, past and present. It is a thorough study of the whole subject, with bibliographic references, useful both to the general practitioner and, particularly, to the specialist in orthopedics.

Crowe: Vaccine Treatment of Rheumatic Diseases

HANDBOOK OF THE VACCINE TREATMENT OF CHRONIC RHEUMATIC DISEASES. By H. Warren Crowe, M.D., B.Ch., (Oxon.), M.R.C.S., L.R.C.P., Director of the Charterhouse Rheumatism Clinic; Late Cons. Physician (Vaccine Treatment) Yorkshire Home for Incurable and Chronic Diseases. New York: Humphrey Milford, Oxford University Press. 1930. Price \$0.80.

In this short monograph the author believes that he has proved, from his experience in a special rheumatism clinic, that specific stock vaccines can be used in the treatment of chronic rheumatic diseases with as good results as autogenous vaccines.

The author believes further that any practitioner who will take the trouble to acquire the technic will quickly satisfy himself that the treatment of arthritis and rheumatism by this method will be most satisfactory. It would seem to be worth the while of general practitioners to study this method rather carefully.

Diagnosis and Nature of Cancer

STUDIES ON THE DIAGNOSIS AND NATURE OF CANCER. By Various Authors. Being Reprints of Special Articles from the "Cancer Review." New York: William Wood and Company. Price \$4.00.

This book is sponsored by the British Empire Cancer Campaign and consists of a series of reprints of papers, almost all by British authors, on various aspects of the cancer question, but particularly on diagnosis.

The volume has little in it that will be of clinical use for the general practitioner in deal-

ing with cancer patients; but its perusal will give him a fund of information on present-day aspects of research into the etiology, recognition and nosologic aspects of cancer.

On looking over the various papers, one is struck with the diversities of the views of distinguished cancer authorities on many of the problems dealt with and one must realize what a real paucity of absolute knowledge there still exists in regard to even fundamental aspects of this scourge of humanity. The main progress in knowledge seems to be destructive—the discarding of long-held views, as the result of more careful investigations and statistics—but perhaps by such a process of elimination, the truth may ultimately be reached.

Borchardt: Constitution and Disease

KLINISCHE KONSTITUTIONSLEHRE; Ein Lehrbuch über die Beziehungen zwischen Körperverfassung und Krankheit für Studierende und Ärzte. Von Prof. Dr. Borchardt, a.o. Professor an der Universität Königsberg (Preussen). Zweite, wesentlich erweiterte Auflage. Mit 73 Abbildungen im Text. Berlin und Wien: Urban & Schwarzenberg. 1930. Price geh. RM 20.— geb. RM 22.—

There is a tendency at the present time to revive the old doctrine of diathesis under new and more scientifically correct terms. Virchow's cellular pathology has lost a good deal of its vogue and the disposition of individuals, families and races to certain types of diseases is known to be associated with characters derived from heredity and the germ plasm. Students who are interested in this study and who read German will find all the pertinent facts collected and discussed in Dr. Borchardt's book. Of course, most of these facts are well known, but it is handy to have them arranged and classified in a concise volume such as this.

Medical Department, United Fruit Company

EIGHTEENTH ANNUAL REPORT OF THE MEDICAL DEPARTMENT OF THE UNITED FRUIT COMPANY. General Offices, Boston, Mass. 1929. Gratis on request.

The eighteenth Annual Report (1929) of the Medical Department of the United Fruit Co. contains, as these reports usually do, some very interesting matter.

The company is doing some wonderful work in its campaign against malaria, as well as against other diseases prevalent in tropical countries. The magnitude of its prophylactic work in the drainage of mosquito-infested regions, as well as its up-to-date, scientific therapeutic work in dealing with established malaria, is astonishing and the various papers dealing with these matters form a most interesting study.

Leishmaniasis, trypanosomiasis, and other tropical diseases are also matters, the control of which calls for special measures.

The general sanitary hygienic work of the company, as shown in the reports and various photographs presented here, is an important factor in rendering the Central American jungle habitable, and even salubrious.

Surgical Clinics of North America

THE SURGICAL CLINICS OF NORTH AMERICA. New York Number. Volume 10, Number 3, June, 1930. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per Clinic year, February, 1930 to December 1930: Paper \$12.00; Cloth \$16.00.

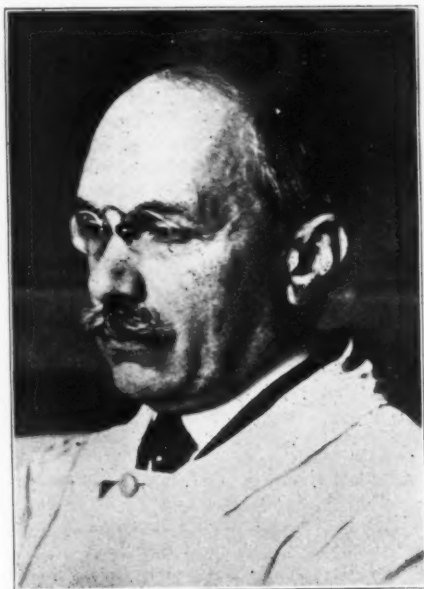
The June 1930 number of the Surgical Clinics of North America is devoted to New York City hospital clinics. There are many very interesting and instructive papers, among which we mention the following as of most importance in regard to general practice: "The Diagnosis of Chronic Appendicitis," by Dr. C. L. Gibson; "Inguinal Hernia," by Dr. T. H. Russell; "Vesical Neck Obstruction" and "Ureteral Calculus—Its Removal by Vaginal Ureterotomy," by Dr. W. S. Pugh; "Reconstruction of the Anterior Crucial Ligament of the Knee Joint," by Dr. A. Krida; "The Role of Sphincter in Three Surgical Cases," by Dr. I. Cohen; "Chronic Infections of the Nasal Accessory Sinuses," by Dr. L. M. Hurd.

Dr. Edwin Beer contributes a good clinical contribution on the new intravenous medium, Uroselectan.

STUDY THE MAN

Facial expression, posture, gesture are the heralds of individuality in function. The habit of looking at these and learning to read their significance is as necessary a part of the good doctor's equipment as is his ability to recognize the difference between the lymphocyte and a polynuclear leukocyte. In itself, the study of human morphology adds perhaps but little; as a means to the larger conception of the man as a whole, however, it is well nigh indispensable.—GEORGE DRAPER, M.D., in "Disease and the Man."

MEDICAL NEWS



Dr. A. Besredka

Dr. A. Besredka, of the Pasteur Institute, Paris, France, is one of the men who is revolutionizing our ideas of bacteriology. It was he who announced his conviction that sensitiveness to bacterial invasion is local and specific in certain tissues, for various types of bacteria; and that if the specifically sensitive areas can be immunized, locally, the entire body will become immune to the organism in question. The skin, for instance, is the sensitive spot in staphylococcus infections, and the intestinal mucosa in bacillary dysentery.

Abundant clinical evidence has now accumulated to show that, where certain organisms are concerned, such or a similar action does take place. In France and other countries the Besredka's specific *antivirus* has been used successfully by *mouth* to

combat dysentery of the Shiga type and other infections. In this country, most of the work has been in immunizing the skin against staphylococci.

Postgraduate Assembly

The International Assembly of the Interstate Postgraduate Medical Association of North America will be held in the municipal auditorium, Minneapolis, Minn., October 20 to 24, inclusive, 1930.

Among the guests who will take part in the program are Dr. Paul Clairmont, of Zurich, Switzerland; Dr. Edmund Gros, of Paris, France; Mr. John Fraser, of Edinburgh, Scotland; John S. Lewis, of London, Eng.; a number of prominent Canadians; and a long list of domestic celebrities of stellar magnitude.

These assemblies are of the greatest interest and practical value to all physicians, and sincere efforts to attend will be well repaid.

Full particulars may be obtained from Dr. Edwin Henes, Jr., 445 Milwaukee St., Milwaukee, Wis.

Office Surgery

The February, 1930, issue of the *American Journal of Surgery* is a veritable compendium of those operative procedures which can safely and properly be carried out in the physician's office. Any general practitioner, who does his own minor surgical work, will find it extremely helpful.

American College of Surgeons

The annual Clinical Congress of the American College of Surgeons will be held in Philadelphia, October 13 to 17, inclusive, 1930.

An impressive program has been prepared, but the attendance will be strictly limited to the number which can be comfortably accommodated in the amphitheatres

and operating rooms of the city, so that those who wish to take part in this meeting must register in advance, paying the fee of \$5.00.

Full particulars may be had by writing to the American College of Surgeons, 40 E. Erie St., Chicago.

Death of Dr. Hiram Byrd

Dr. Hiram Byrd, of Detroit, whose work on the sphenopalatine ganglion has been attracting a good deal of attention, of late, was suddenly stricken with heart failure on July 20, and died quite promptly. He was only 55 years old and was in process of collecting and correlating the literature on Meckel's ganglion, with a view to pursuing researches in regard to its functions.

Opening in South Dakota

Information has been received to the effect that there is a good opening for an active physician in a thriving town in South Dakota.

For full information, write to F. B. Kargleder, Druggist, White Rock, So. Dak.

Brain Tumor Clinic

A clinic and demonstration on benign and malignant tumors of bone, with the presentation of many lantern slides, will be held at the Belvedere Hotel, Baltimore, Md., Sept. 15, 16 and 17, 1930. All physicians who are interested in the subject and anyone who has a fully worked up case of the kind may register it for presentation. The hotel will make special rates for three persons in a room and for meals on the club plan. Such an opportunity for studying bone tumors is rarely offered. Attendance is limited to 800.

Full particulars of the meeting and of the registration of cases can be obtained from Miss Maude Walker, Secretary to Dr. J. C. Bloodgood, Surgical Pathological Laboratory, Johns Hopkins Hospital, Baltimore, Md.

American Public Health Association

Because steers and bucking bronchos come to one's mind immediately when Texas is mentioned, the members of the American Public Health Association who

are responsible for arrangements for the fifty-ninth annual meeting to be held in Fort Worth, October 27 to 30, 1930, have asked the local entertainment committee for a rodeo. And they are to have it, unless something happens to all of the bronchos in the meantime.

A real rodeo in its native setting is only one of the things to which delegates to the Fort Worth meeting will be treated. In addition to watching native sons wrestling with steers and ponies, they will see the best scientific minds of the country wrestling with such subjects as the antiphtheria campaign; undulant fever; and meningitis. These three topics will be made the subjects for joint sessions to be participated in by all the sections of the Association.

Further information about the Fort Worth meeting will be furnished by the executive secretary, Homer N. Calver, 370 Seventh Avenue, New York, N. Y., upon request.

U. S. Civil Service Examinations

The United States Civil Service Commission announces the following open competitive examinations:

Chief Nurse (Indian Service)

Head Nurse (Indian Service)

Graduate Nurse (Various Services)

Graduate Nurse, Visiting Duty (Various Services)

Graduate Nurse, Junior Grade (Various Services)

Applications for the above-named positions must be on file with the Civil Service Commission at Washington, D. C., not later than December 30, 1930.

Senior Medical Officer (Pathology)

Associate Medical Officer (Pathology)

Applications must be on file with the Civil Service Commission at Washington, D. C., not later than September 24, 1930.

The examinations are to fill vacancies in the United States Public Health Service, and in positions requiring similar qualifications.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward request for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, a registered pharmacist, or a nurse.

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| <p>F- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katharine L. Storm.</p> <p>F- 17 An Index of Treatment. Burnham Soluble Iodine Co.</p> <p>F- 45 Vera-Perles of Sandelwood Comp. Paul Plessner Co.</p> <p>F- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.</p> <p>F- 49 The Calcreose Detail Man. Maltbie Chemical Co.</p> <p>F- 95 Everything for the Sick. Lindsay Laboratories.</p> <p>F-103 The Electron, September-October, 1930. McIntosh Electrical Corporation.</p> <p>F-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.</p> <p>F-120 Building Resistance — Guiatonic. William R. Warner & Co., Ltd.</p> <p>F-156 Siomine (Methenamine Tetraiodide). Pitman-Moore Company.</p> <p>F-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.</p> <p>F-244 I Am Oxiphen! Pitman-Moore Co.</p> <p>F-256 The Modern Way of Giving Digitalis. Upsher Smith Co.</p> <p>F-258 Prophylaxis. August E. Drucker Co.</p> | <p>F-268 Eat Uncle Sam Health Food. Uncle Sam Breakfast Food Co.</p> <p>F-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc.</p> <p>F-271 The Intestinal Flora. The Battle Creek Food Company.</p> <p>F-292 Acidosis and Infection—Alka Zane. William R. Warner & Co., Inc.</p> <p>F-301 Merrell's Salicylates. The Wm. S. Merrell Company.</p> <p>F-310 Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co.</p> <p>F-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D., Battle & Company.</p> <p>F-336 The Secret of Our Digestive Glands. J. W. Wuppermann Angostura Bitters Agency, Inc.</p> <p>F-347 A Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company.</p> <p>F-354 Getting the Most Out of Life. Stanco, Inc.</p> <p>F-369 Burdick Zoalite Series for Infra Red Therapy. The Burdick Corporation.</p> <p>F-374 Table for Determining Date of Delivery. The Viburno Company, Inc.</p> <p>F-377 All that joyous Aroma but less Nicotine. Health Cigar Co.</p> |
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- F-379 Endocrine and other Organotherapeutic preparations. Armour and Company.
- F-388 Syrup Histosan Controls the Cough In Acute and Chronic Bronchitis, Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc.
- F-391 Imhotep. Egyptian Medicine Was a Quaint Mixture of Rationalism and Magic — Agarol. William R. Warner & Co., Inc.
- F-392 Arthritis. Its Classification and Treatment. Battle & Co.
- F-396 Rational Relief of Postpartum Pains through Gynodyne Therapy. Schering & Glatz, Inc.
- F-399 Nitium, Crayon, Ovule, a Medication Radioactive. High Chemical Co.
- F-401 When the Cross Roads are Reached in Hemorrhoids (Piles). Schering & Glatz, Inc.
- F-402 The First Question—Agarol. Wm. R. Warner & Co., Inc.
- F-404 Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz.
- F-408 When colds hang on and coughs are stubborn remember the effectiveness of Thiocol. Hoffmann-La Roche, Inc.
- F-410 Acidosis. A Warning Sign In Pregnancy.—Alka-Zane. Wm. R. Warner & Co., Inc.
- F-412 The New Colloidal Antacid. The Wander Co.
- F-414 Laboratory Tests in Pictures—Silvagon. Ernst Bischoff Company, Inc.
- F-415 Allonal, "Roche," Its Indications in Various Fields of Medicine and Surgery. Hoffmann-La Roche, Inc.
- F-418 Diphtheria Can Be Kept from Your Family by Protective Immunization. The National Drug Co.
- F-420 That Delicious Flavor. Angostura Dry, the New Ginger Ale. J. W. Wuppermann Angostura Bitters Agency, Inc.
- F-424 When Chemists Turned from Gold to Drugs, Pantopon, Roche. Hoffmann-La Roche, Inc.
- F-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co.
- F-429 Eupinol, a distillate produced at a special temperature from the resinous wood of *Pinus Palustris*. The Tilden Company.
- F-430 Three Timely Papers. McIntosh Electrical Corporation.
- F-433 Changing From This to This. Reducing Glycosuria. The Harrower Laboratory, Inc.
- F-436 Lydin, a New Standardized Masculine Hormone. The Harrower Laboratory.
- F-439 Burdick Light Therapy Equipment. The Burdick Corporation.
- F-440 Net Price List of Pharmaceutical Specialties and Physicians Supplies. Sutliff & Case Co.
- F-441 The Treatment of Luetic Infection—Spirotex—"One of the Liprozymes." Carroll Dunham Smith Pharmacal Co.
- F-442 AbilenA, the Ideal Cathartic Water. The Abilena Co.
- F-443 AbilenA. Its Location, Discovery, Origin, Chemistry, Medicinal or Clinical Value and Uses. The Abilena Co.
- F-444 Rules and Regulations of The Keeley Institute.
- F-445 Not One Chance in 100. The Keeley Institute.
- F-446 Dependable Products, Pan-Secretin Co., Adreno-Spermin Co., Lydin and Pancreas Co. The Harrower Laboratory, Inc.
- F-447 A Short Discussion of Chronic Dermatoses. Carroll Dunham Smith Pharmacal Co.
- F-448 May 1930, Supplement to Net Price List containing new Pharmaceutical Specialties, Solu-Caps, Ointments, Syrups, Tablets. Sutliff & Case Co., Inc.
- F-449 General Catalog of Medicinal Chemicals. Bilhuber-Knoll Corp.